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ADAPTATION OF THE SUPPLY CHAIN FINANCE ADOPTION FRAMEWORK IN THE FINNISH MARKET

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR

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ABSTRACT OF THE MASTER´S THESIS

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The recent financial crisis and economic downturn have raised working capital management to the spotlight of companies. Smaller suppliers have been constrained financially as large buyers seek to optimise their working capital positions by paying later which worsens the operating conditions of SMEs. Previous research points to the benefits of managing supply chains in a more holistic manner and the focus is now turning towards financial supply chains. As companies concurrently aim at releasing tied capital by extending their payment terms towards suppliers and preserving a healthy supply chain by supporting the liquidity of their suppliers, new innovative financial instruments such as Supply Chain Finance (SCF) become increasingly attractive.

The whole field around SCF is still in its early stages in Finland while in other parts of the world such solutions are gaining increasing popularity. This study seeks to find out the answers to the lagging domestic development by addressing the following research questions:

1. *How do buyer companies initiate the adoption of Supply Chain Finance?*
2. *What are the drivers and obstacles related to Supply Chain Finance adoption?*
3. *What is the role of banks in adopting Supply Chain Finance?*

The main material of this thesis comes from 14 interviews with six case companies and four banks. The data is analysed using the grounded theory methodology. The results of the analysis are presented in the form of an innovation adoption process framework with the focus on the first two stages, namely Agenda-setting and Matching. The core category was found to be *Matching the company agenda with available solutions*.

This study reveals that if the agenda is in place, lack of familiarity with SCF inhibits companies from advancing from the Agenda-setting stage. During Matching the main concepts are the *need to restructure* processes (buyers) and the *need to redefine* the solution (service providers). The final scope of the solution is a product of the agenda of the company and the capabilities of the available instruments. Service providers should address the lack of familiarity in the Finnish market while offering scalable programs to better align with the larger scope of suppliers of buyer companies.

Keywords: Supply Chain Finance, grounded theory, working capital management, financial supply chains	Publishing language: English

AALTO-YLIOPISTO **DIPLOMITYÖN TIIVISTELMÄ**

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Finanssikriisi ja siitä seurannut taloustaantuma ovat nostaneet käyttöpääoman hallinnan keskiöön yrityksissä. Erityisesti pienemmät toimittajat ovat joutuneet tiukkaan taloudelliseen tilanteeseen, kun suuret ostajayritykset pyrkivät parantamaan käyttöpääoma-asemaansa venyttämällä maksuaikoja. Tämä vaikeuttaa merkittävästi pk-yritysten toimintaa. Aikaisempi tutkimus on osoittanut toimitusketjujen kokonaisvaltaisen hallinnan hyödyt, ja ketjuissa kulkevat rahavirrat ovat erityisesti nousseet kiinnostuksen kohteeksi. Yritysten pyrkiessä yhtäaikaisesti vapauttamaan pääomaa toimitusketjuistaan pidentämällä maksuaikojaan ja huolehtimaan toimittajiensa toimintakyvystä uudet ja innovatiiviset toimittajarahoituksen (Supply Chain Finance) tyyppiset ratkaisut näyttäytyvät entistä kiinnostavampina.

Suomessa toimittajarahoitus on vielä aiheena uusi, vaikka muualla toimittajarahoitusratkaisut ovat jo arkipäiväistymässä. Tutkimuksen tavoite on ottaa kantaa kysymykseen ”Miksei toimittajarahoitusta käytetä enemmän Suomessa?” vastaamalla seuraaviin alakysymyksiin:

1. *Miten ostajayritysten toimittajarahoituksenomaksumisprosessi lähtee käyntiin?*
2. *Mitkä ovat ajurit ja toisaalta esteet toimittajarahoituksen omaksumisessa?*
3. *Mikä on pankkien rooli toimittajarahoituksen omaksumisessa?*

Tutkimusaineisto koostuu 14 haastattelusta, jotka suoritettiin kuudessa case-yrityksessä ja neljässä pankissa. Datan analysoimiseen käytettiin ns. ankkuroitu teoria -menetelmää. Tulosten esittämiseen on käytetty innovaatioiden omaksumiseen tarkoitettua viitekehystä, jonka vaiheista oleellisia ovat kaksi ensimmäistä, ns. agendan laatiminen ja täsmäyttäminen. Tulokset yhteen kokoava ydinteema on nimeltään *yrityksen agendan täsmäyttäminen saatavilla oleviin ratkaisuihin*.

Tutkimustulosten perusteella agendan ohella toimittajarahoituksen tuttuus vaikuttaa omaksumisprosessissa etenemiseen ensimmäisessä vaiheessa. Täsmäyttämisvaiheessa oleellisimpia käsitteitä ovat *uudelleenjärjestäytymisen tarve* ostajayrityksen puolella ja *uudelleenmäärittämisen tarve* palveluntarjoajan puolella. Lopullisen ratkaisun laajuus määräytyy yrityksen agendan ja mahdollisen palvelun kyvykkyyksien yhteisvaikutuksesta. Suomessa palveluntarjoajien tulisi pyrkiä lisäämään tietoisuutta toimittajarahoituksen mahdollisuuksista ja tarjota ratkaisuja, jotka soveltuvat suurellekin toimittajajoukolle.

Asiasanat: toimittajarahoitus, ankkuroitu teoria, käyttöpääoman hallinta, rahavirrat	Julkaisukieli: englanti

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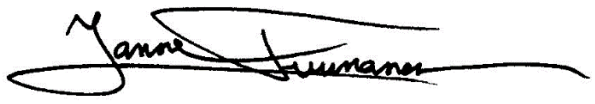
I want to give a heartfelt thank you to my lovely girlfriend Margareta for her never-ending support and belief in me as well as her ability to take my thoughts away from my sometimes stressful work.

Finally I thank you, dear reader, for getting at least this far browsing this thesis. Just so you know I have never worked so hard on anything in my life. Now that this metaphorical chapter comes to an end I feel both exhausted and grateful. I sincerely hope that rewarding projects and inspiring people will continue to fill my life after I graduate.

In Espoo, in October 2015



Janne Tuunanen

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1 INTRODUCTION

The 20th century business model was a vertically integrated company that dominated the particular industry, whereas the modern ideal emphasises lean operations with a minimal amount of working capital, short selling cycles and as few assets as possible. As companies focus on their core competencies they increasingly outsource functions where they can't add significant value. This has raised the importance of supply chains in business as the operations of the company depend to a large extend on their suppliers and, quite naturally, on their customers as well. Following this notion supply chains are increasingly integrated as supply chain members are seen more as partners and not as competitors, with competition in general being more between supply chains than individual companies (Hofmann and Belin, 2011; Sagner, 2011). At the same time due to globalisation and the number of stakeholders supply chain networks are increasingly complex (Manuj and Sahin, 2011).

1.1 THE RISING IMPORTANCE OF WORKING CAPITAL MANAGEMENT

The financial crisis of 2008 resulted in a credit crunch that caused the banks to take a more conservative stance on their lending. Especially smaller companies are easily affected by a lack of liquidity as their access to financing is more limited even in normal market conditions (Soufani, 2000). Larger corporations too have seen their financing options becoming scarcer, but luckily they typically boast thick bank accounts which shield them from liquidity issues. On the other hand the economic downturn following the crisis has cut the growth in many markets. These factors together have set new requirements for companies to manage their cash and to take notice of their usage of capital, causing them to look for alternative ways of funding operations. This has resulted in an increasing concern about the working capital position of the company and the money that is tied up in operations, notably the supply chain (Hofmann and Belin, 2011). Traditionally the operational side has kept its distance to finance but now even the academic world is increasingly interested in bridging the gap between finance and Supply Chain Management (SCM) (for example Protopappa-Sieke and Seifert, 2010).

Historically working capital has been seen as a purely positive thing (Sagner, 2011). As long as there are enough inventories and the company doesn't run out of cash everything is fine. However, having an excessive amount of inventory and cash doesn't maximise shareholder value (Hofmann and Kotzab, 2010). The new view on working capital management is such that it aims at optimising the use of capital and increasing the effectiveness of capital usage to a maximum by for example getting rid of excess inventory (Sagner, 2011). One of the most notable ways to measure working capital is the net working capital.

Net working capital expresses how much money there is tied to business via inventory levels and payment terms towards both customers and suppliers. It is calculated by deducting current liabilities from current assets, or broken down to its constituents as presented by for example Camerinelli (2009):

NET WORKING CAPITAL = ACCOUNTS RECEIVABLE + INVENTORY – ACCOUNTS PAYABLE

An even more appropriate measure for the working capital position of the company is the cash-to-cash (C2C) cycle (Losbichler et al., 2008). It is measured in days and is defined as:

CASH-TO-CASH (C2C) CYCLE = DSO + DIO – DPO

where DSO = days sales outstanding, DIO = days inventory outstanding and DPO = days payables outstanding. The C2C cycle essentially tells how long it takes the company to receive cash from its sales starting from the point where it pays its suppliers. As a time-based measure the C2C figure is very tangible. Drivers of both the net working capital and the cash-to-cash cycle are more on the operational side than the financial side.

As can be seen from the formulations above there are many areas that affect the working capital position of a company. Managing working capital is indeed a cross-functional effort that involves many departments from operations. Without a holistic view on working capital its management is thus bound to be suboptimal. Efficient working capital management relates directly to the profitability of a company (Camerinelli, 2009; Johnson and Templar, 2011). Efficiency results from operations performing better as well as having more funding at hand and less capital tied in current assets. In an effort to try and optimise the circulation of their cash flows one way that especially larger companies are handling the tightening and overall challenging economic conditions is to try and negotiate longer payment terms with their suppliers. This adds further stain to small and medium-sized enterprises (SMEs) on the supplying end as it increases their financing needs (van der Vliet et al., 2015).

As the focus is more and more on supply chains instead of individual companies, managers and academics alike have come to the realisation that shifting costs to suppliers could be short-sighted. While it could bring some short-term benefits, over time it might result in a more disruption-prone supply chain. In such a case suppliers are essentially funding their customers, even though their cost of capital is likely to be higher and also the access to financing is likely to be more constrained, as mentioned before. A single company optimising its C2C cycle results thus in suboptimal performance in the supply chain. It is now widely accepted that collaborative thinking in terms of

C2C is more beneficial than the single-company approach (Hofmann and Kotzab, 2010; Losbichler et al., 2008; Randall and Farris II, 2009).

1.2 FINANCIAL SUPPLY CHAINS AND WORKING CAPITAL OPTIMISATION

As the focus is shifting from companies optimising working capital locally to a more holistic view of the whole supply chain, a field called Financial Supply Chain Management (FSCM) is becoming more and more relevant. As physical flows of goods have already been optimised the interest is now turning to the financial supply chains. While optimising other (physical) aspects of the supply chain the financial side often suffers (Camerinelli, 2009). In addition, instead of selfishly optimising the financial flows of the focal company the health of suppliers should be considered too (More and Basu, 2013). This also raises the question about the collaboration between key functions in companies, as financial professionals are not involved enough in companies' investments made in operations even though those decisions spend a big portion of the capital (Alvarenga, 2014). Optimising inventories in co-operation and renegotiating payment terms are some of the means to improve the working capital position, but the practice of FSCM also includes a set of financial instruments that typically make use of an external financing partner.

It's nothing new that companies try to negotiate with their suppliers in order to find arrangements that benefit both parties when it comes to liquidity and releasing idle money tied in supply chain operations. Many companies offer cash discounts to their suppliers, which is a form of self-financing. The term self-financing refers to the fact that there is no external funding involved which makes the arrangement very straightforward. The terms usually include a fixed discount for an advanced payment that is made for example in 14 days instead of 30 days. For a large buyer company with lots of passive money in its bank account this can be a really prolific way to use that excess cash, as even a nominal discount of say two percent yields to a significant annual interest rate in the double digits. A more advanced form of cash discounts is a practice called dynamic discounting where the discount varies with time. As noted by Hofmann (2005), these kinds of commercial credits are among the most expensive financial products, the expense being paid by the supplier.

Especially in international trade the practice of selling goods on permissible delay in payments is referred to as open account financing. Considering the many risks that are involved when buyers and sellers operate in different countries this could be a questionable arrangement from the supplier point-of-view, but oftentimes such terms are necessary to make the sale in a globally competed marketplace. To mitigate the risks the transaction could include a letter of credit. A letter

of credit is a product offered by banks that is used especially in international business to manage the risk between buyers and suppliers who might not know each other that well. In practice the bank of the buyer makes a guarantee that the supplier will get the payment against an appropriate delivery. These international bank transactions are often costly too (Hofmann, 2005).

Other widely recognised and applied solutions involving a financing partner include factoring, selling receivables and reverse factoring. A comprehensive list of Financial Supply Chain Management practices is provided by for example Wuttke et al. (2013b).

1.2.1 Factoring and selling receivables

Factoring is a way to get short-term financing against an asset that is readily at hand i.e. accounts receivable. In many markets factoring has become the main source for working capital financing (Klapper, 2006). Using factoring is more widespread among smaller companies, even though the adoption rate seems to be fairly modest (Klapper, 2006; Soufani, 2000). Soufani (2000) found that 5,6 percent of SMEs in the UK use the instrument.

The definitions vary to some extent. A lot of the time factoring and selling receivables are used interchangeably as terms. When receivables are sold the financing party will take propriety of the invoices. Factoring can also be understood as receiving a loan with the receivable as a collateral. This is how factoring is often viewed in Finland. The working principle of factoring is presented for example by Soufani (2000). In practice factoring involves an external partner, a factor, who buys the receivables off of the supplier in exchange for cash. The factoring fee is deducted from the nominal amount. The factor assumes the credit risk and takes responsibility for collecting the payment, which can be in some cases a major benefit for the supplier (Klapper, 2006; Soufani, 2000).

The more difficult it is for a company to get financing from a bank, the more they tend to use factoring (Soufani, 2000). Smaller companies tend to be more hard-pressed to get bank financing which may lead to them take advantage of factoring services instead (Soufani, 2000). Soufani (2000) also found a link between financial difficulties and factoring usage.

However, factoring is an expensive form of financing (Seifert and Seifert, 2011). As suppliers might sell receivables from a number of buyers the factor is forced to evaluate the creditworthiness of each of these buyers individually. This results in high operating costs (Seifert and Seifert, 2011). As the companies that opt to use factoring have to cover the expenses somehow the financing costs typically show in the price that their customers pay.

1.2.2 Reverse factoring

While factoring is executed as a two-way agreement between the (supplying) company and the factor, reverse factoring is a more elaborate arrangement that is initiated by the buyer organisation. The term "reverse" refers to the fact that it's the buyer who acts as an initiator of the program and offers it to their supplier base. The main benefit for the supplier, in comparison to regular factoring, is that they receive funding for the cost of capital of their customer. In order to benefit from this credit arbitrage the buyer company has to be more creditworthy, and thus typically larger, than the supplier. The arrangement brings the buyer and its suppliers closer to each other by tightening the integration between the two (Klapper, 2006). This network of operators – the buyer, suppliers and bank(s) – is what makes reverse factoring a lot more complex than factoring. The solution is very technologically driven (Dello Iacono et al., 2015) and automation in payment processes is required (More and Basu, 2013).

With reverse factoring both parties have the potential to improve their working capital as buyer companies get to extend their days of accounts payable and suppliers have a chance to receive money faster. Investment grade companies can extend their creditworthiness to their suppliers and thus reduce the total cost of capital in the supply chain. The faster circulation of cash results in a liquidity injection in the supply chain as cash that was previously tied up is freed.

The working principle of reverse factoring is explained in a thorough manner by for example Tanrisever et al. (2015, 2012). **Figure 1** is their illustration of the arrangement. Once the system is in place it allows the supplier companies to fund their accounts receivables from a financial institution, a bank, as an option to receive immediate cash. At the same time a payment term extension is negotiated, improving the accounts payable of the buyer company.

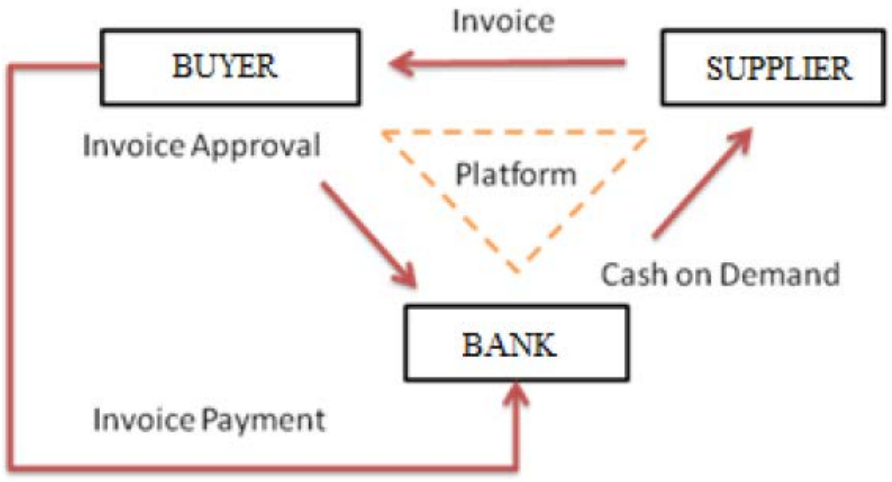

Figure 1 A reverse factoring arrangement involving a buyer, a supplier and a bank (Tanrisever et al. 2015, 2012)

In case the supplier chooses to fund their invoices they receive a discounted amount of cash from a bank in a matter of few days. The bank sees the buyer company as the creditor and thus offers the money at the price of the larger company. At the end of the extended payment period the bank receives the payment from the buyer company. The risk for the bank is related to the buyer company not being able to pay their invoices. Since typically this risk of default is a lot lower with larger companies than with SMEs the funding will be a lot cheaper. Reverse factoring solutions provide an interesting business opportunity for banks as they provide a sound business in terms of Risk-Weighted Assets.

The solution benefits the buyer who should be able to extend their payment terms as the financing for the suppliers is secured. Having less capital tied in short-term operations a company can free assets to use for investing, for example. Achieving noticeable benefits requires that a significant amount of spend is covered by the program. A typical challenge is to get the solution sold to the suppliers and carry out a successful supplier onboarding.

1.3 SUPPLY CHAIN FINANCE

After we have defined a number of well-established tools used to manage working capital both in large and smaller companies we get to the actual topic of this thesis – Supply Chain Finance (SCF). First of all, it's apparent in the existing literature that the terminology is not set in stone when it comes to the subject. Camerinelli (2009) addresses the difference between a financial supply chain and supply chain finance by noting that the former is the financial processes that happen in a supply chain, such as issuance of an invoice, whereas supply chain finance is the products and services offered by banks that facilitate the management of supply chains. A similar high level definition of supply chain finance is adopted by a large group of authors. Supply chain finance can encompass both supplier-centric (for example Paulson et al., 2011; Pfohl and Gomm, 2009; Wang et al., 2012), and buyer-centric solutions (for example van der Vliet et al., 2015; Wuttke et al., 2013a). Some others still use a differing form of "supply chain financing" to refer to the broad concept (Silvestro and Lustrato, 2014). On the other hand the term supply chain finance is sometimes used synonymously with reverse factoring (for example Kerle, 2009). Some refer to the upstream solution as "supplier financing".

As there are many varying definitions that sometimes differ significantly in scope, I'll take a moment to summarise the various definitions and present the terminology that is adopted in this study. To demonstrate the wide range of meanings the term encompasses I present a select number of

definitions taken from related literature. Some of the definitions include, from the broader to the narrower:

"Located at the intersection of logistics, supply chain management, collaboration, and finance, Supply Chain Finance is an approach for two or more organisations in a supply chain, including external service providers, to jointly create value through means of planning, steering, and controlling the flow of financial resources on an interorganisational level." (Hofmann, 2005)

"*[Supply chain finance can be defined as] managing, planning and controlling all the transaction activities and processes related to the flow of cash among SC stakeholders in order to improve their working capital*." (More and Basu, 2013)

"[Supply chain finance comprises the] financial arrangements used in collaboration by at least two supply chain partners and facilitated by the focal company with the aim of improving the overall financial performance and mitigating the overall risks of the supply chain." (Steeman, 2014)

"[Supply chain finance is] an automated solution that enables buying firms to use reverse factoring with their entire supplier base, often providing flexibility and transparency of the payment process." (Wuttke et al., 2013b)

For a comprehensive outlook on the various definitions in the existing literature see Steeman (2014). As can be seen from the many definitions the terminology is not established.

1.3.1 Defining Supply Chain Finance in this study

Due to the many definitions in existing literature it's important to sharpen the terminology that is used in this study. Steeman (2014) identifies three different levels of supply chain finance that are discussed in existing literature. For the sake of simplicity I'll be referring to two levels of supply chain finance in this study. In the context of this study the interest is especially in the spesific solution and any broader definitions can be thought of as "the rest". Hence from now the term refers either to the broad concept including a range of Financial Supply Chain Management practices (supply chain finance) or the specific product similar to reverse factoring involving an external service provider (Supply Chain Finance), the difference being in the capitalisation. This is in line with the service titled Supply Chain Finance by OpusCapita which is a Finnish service provider. The abbreviation SCF uniquely refers to the solution. Supply Chain Finance is also referred to as a "solution", an "arrangement", a "program" or a "facility".

As noted before some refer to reverse factoring as Supply Chain Finance. However, it is justifiable to draw a line between the two solutions since even though the working principle is identical, the

scope and the applicability of the two solutions are different (Wuttke et al., 2013a, 2013b). This distinction will prove useful later on in the analysis as well. OpusCapita defines Supply Chain Finance in the reverse factoring sense, but at the same time the solution is a lot more automated and scalable than the reverse factoring counterparts. The two definitions of supply chain finance are summarised in **Figure 2** below.

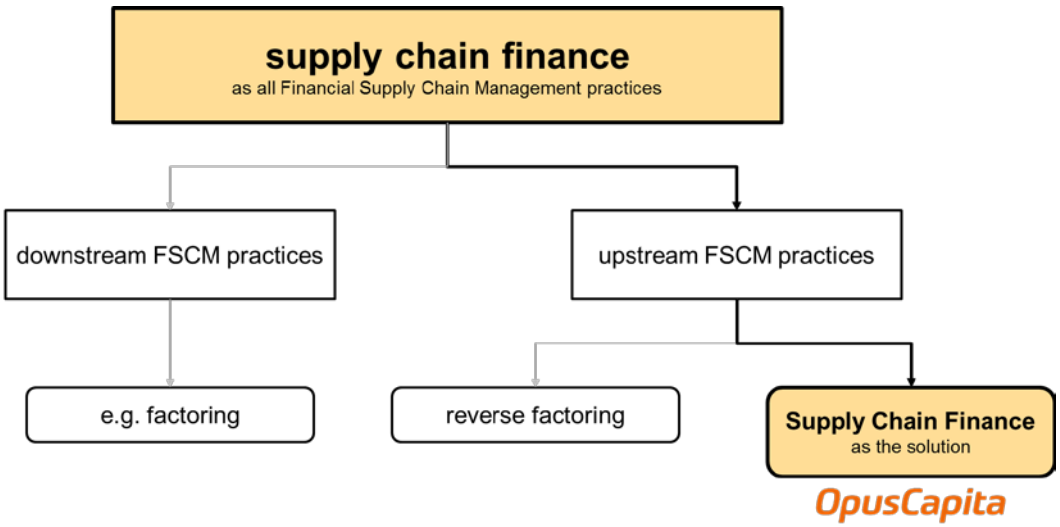

Figure 2 Definition of Supply Chain Finance

1.3.2 Diffusion of supply chain finance and reverse factoring

Reverse factoring solutions haven't been adopted widely despite their apparent win-win nature (Seifert and Seifert, 2011). Interest in both reverse factoring and supply chain finance in general is high, but the growth so far has been modest (Camerinelli, 2013). Hofmann and Belin (2011) speculate that this could be partly due to the novelty of the practice and the lacking research demonstrating the benefits. That said, there are markets where financing the supply chain has become a common practice. For example in China supply chain finance was launched by Shenzen Development Bank in 2006 (Ying, 2012). Spain, on the other hand, has been a pioneering market in adopting reverse factoring (Tanrisever et al., 2015, 2012). At the same time the practice of supply chain finance is experiencing strong growth in all the major market areas. The EMEA market (Europe, the Middle East and Africa) is estimated to grow on average 15-30% annually (BCR Publishing, 2015).

Even though the solutions are not a common practice a number of global success stories exist. Those that are widely cited by academics and practitioners alike include Boeing (Tanrisever et al., 2015, 2012), Volvo (Seifert and Seifert, 2011), Unilever (Hofmann and Kotzab, 2010; Seifert and Seifert, 2011) and Scania (Seifert and Seifert, 2011). Unilever managed to reduce their working

capital by 40% over four years, whereas with the reverse factoring arrangement the suppliers of Scania "receive payment after as little as five days".

As the field is in its early stages supply chain finance represents new business areas for banks and other service providers. In the extended supply chain financial institutions play an important role (Hofmann, 2005). Recent market developments have also raised the interest of OpusCapita, a Finnish company offering financial management automation and outsourcing, who has recently launched a new financing service titled Supply Chain Finance.

1.4 THE FINNISH MARKET

The Finnish corporate world is characterised by conservative payment terms and a high level of conscientiousness, as was pointed out by many of the study participants. Indeed, Finland is one of the fastest-paying countries in Europe with the average actual payment time of 23 days (with delays) in the business-to-business sector and a very small percentage (1,1) of yearly revenues written off because of bad payments (Intrum, 2015). The trend is, however, towards longer payment terms, partially brought on by globalisation. Players in the global marketplace are used to open account practices and a Finnish company wanting to retain their competitiveness has to adapt to those terms. At the same time a similar development can be observed in the domestic market too. According to a recent survey by the Bank of Finland the payment terms are increasing especially with SMEs (Bank of Finland, 2013). This is causing discomfort with some stakeholders.

The concern about the longer payment terms on a European level is showcased by the European Late Payment Directive which states that payment terms aren't allowed to extend 60 days except when agreed upon explicitly by the two counterparties that are concerned. Recently the Finnish government took an even stricter stance passing a law that set the limit to 30 days. The law came into effect in May 2015 (FINLEX, 2015). Reasonable payment terms have been fairly visible in media as well with the union representing SMEs (Suomen Yrittäjät) being especially vocal about the issue, advocating the law to restrict the extension of payment terms. The law proposal was in fact originally made by Suomen Yrittäjät.

In the Finnish market factoring has only recently taken on. According to the statistics by Finanssialan Keskusliitto (2015) factoring limits rose by 29,2% between 2013 and 2014 and is thus the most rapidly growing form of corporate financing in Finland (Finanssialan Keskusliitto, 2015). As noted before the more sophisticated supply chain finance products are demanding technology-wise, making the technological readiness and Financial Supply Chain Management practices of Finnish companies an interesting point of view. A recent survey found that most of the large companies

(90%) in Finland have already taken e-invoicing into use, with the majority of SMEs using them as well (Bank of Finland, 2013). As a comparison a global poll by Seifert and Seifert (2011) found that 77% of companies receive less than a third of their invoices electronically.

1.5 STUDY SETTING

1.5.1 OpusCapita

OpusCapita is a Finland-based international operator in financial management services and part of the state-owned Posti Group. They offer a wide range of products and services for companies to manage their incoming and outgoing payments and financial transactions, covering full end-to-end product-service solutions as well as full-blown outsourcing. Looking to expand their market offering even more the company has recently launched a service, Supply Chain Finance to help both buyer and supplier companies improve their working capital positions. By offering the program to their suppliers buyers are able to alleviate the financial stress of their supplier base. Such a financing solution is fairly new to Finland and the market potential is perceived to be significant. OpusCapita assigned this thesis in an effort to better understand the reasons why Supply Chain Finance isn't already an established practice in this part of the world.

1.5.2 Research questions

Despite the apparent win-win-win nature of the solution and its adoption rate in other parts of the world the widespread usage of reverse factoring and Supply Chain Finance has eluded Finland so far. This study sets to find the answer to the following broad research question: *Why isn't Supply Chain Finance used more in Finland?* The question is justified firstly because the solution is seeing some significant growth in every major market (BCR Publishing, 2015) and, as has been presented already, the solution promises some clear benefits for each counterparty. These financial and qualitative benefits will be discussed further in the literature review. The question is also of major interest and relevance to the assigning company.

Implementation has been a topic of interest in recent literature (for example Seifert and Seifert, 2011; Wuttke et al., 2013a). Because the practice is new to the Finnish market this study focuses on the first steps of the adoption, starting from the awareness related to the solution. Another main line of thought is the role of banks in SCF adoption as opposed to for example Wuttke et al. (2013a) who study the role of suppliers in how buyers implement Supply Chain Finance. The hypothesis is that as current providers of supply chain finance solutions banks play a significant role in the process of adoption and have helped shape the market so far. It also seems quite natural to consider the factors that would advance SCF adoption, *the drivers*, and on the other hand the factors working

against the adoption, *the obstacles*. In order to answer the main question these ideas can thus be formulated as sub-questions in the following way:

1. *How do buyer companies initiate the adoption of Supply Chain Finance?*
2. *What is the role of banks in adopting Supply Chain Finance?*
3. *What are the drivers and obstacles related to Supply Chain Finance adoption?*

1.5.3 Outline of the study

In order to answer the research question and its sub-questions this study outlines the beginning of the adoption process of SCF for companies in a more precise manner than has been done so far. The main material comes from company interviews and the framework is that of innovation adoption process in organisations by Rogers (2003) and Wuttke et al. (2013a). The 14 interviews were conducted in six major Finnish companies and four banks in total. The main findings indicate that familiarity with the solution plays a key role in the early steps of the adoption and that the company agenda together with the capabilities of the service providers sets the final scope of the solution. These interdependencies are formulated in the final framework.

The observations indicate that familiarity is one of the major issues in the Finnish market, the other one being a mismatch between companies' needs and the current solutions. The role of banks is found to be significant in the adoption process. As current solutions fall short in some respects there is value to be added by 4th party system integrators such as OpusCapita. The term "4th party system integrator" refers to the service provider being the fourth player in an arrangement traditionally comprised of a buyer, suppliers and (a) bank(s), as well as the fact that the technologically driven solution is very new and innovative.

1.5.4 Contributions of the study

The following study serves the academic and managerial worlds in several ways. First of all it summarises the current literature on supply chain finance, highlighting the many definitions the term has and pointing to the novelty of the topic. Secondly it continues on the path of Wuttke et al. (2013a, 2013b) applying more qualitative methods to the field, notably that of an open-ended grounded theory methodology. Financial Supply Chain Management in general is a relatively new field where there is an emphasis on more analytical approaches with less focus on empirical research (Gomm, 2010). I formulate a substantive theory in the innovation adoption of Supply Chain Finance, notably in the Finnish market environment. As this is one of the first studies in this field in Finland studying a fairly little-studied topic it can be considered a game-opener. Thirdly this thesis addresses the operational environment in Finland specifically giving important insights to a company entering the market. This study is also one of the first to study the role of banks (who

have traditionally been offering supply chain finance services) with an empirical approach. Fourthly I'll posit testable propositions that constitute the main analytical contribution of this study. As a fifth and final contribution the study reveals avenues for further research.

1.5.5 Structure of the thesis

The remainder of this thesis is structured as follows. First the relevant literature will be reviewed to acquire an understanding of the previous research done in the relevant fields such as financial supply chains and the relationship between finance and operations in a company. Then there will be a comprehensive description of the research design and the methodology that was applied as well as the details of data collection and sampling. The process of analysis will be outlined as well. After that the findings are presented. The concepts that emerged from the data are introduced under the main categories. The final model of the early steps of SCF adoption will be summarised with an integrative framework at the end of the findings. After that conclusions will be drawn from the findings and the research questions will be answered. The last part of the study is dedicated to discussion about the implications of the research, its limitations and some paths for further inquiry.

2 LITERATURE REVIEW

In order to better understand the theoretical background of supply chain finance solutions and to get a preliminary conceptual understanding of the topic an extensive literature review was conducted. Literature streams informing this research include Supply Chain Management (SCM) and financial supply chains in particular, as well as supply chain finance. This review will also somewhat cover the field of innovation adoption management – the primary framework of this study. Towards the end of the section I'll list avenues for further research in the literature that have been identified during the course of the review. I'll also summarise the findings and list the preliminary concepts that could be useful later on in the analysis section.

2.1 SUPPLY CHAIN MANAGEMENT

Supply chains are comprised of several flows, namely the physical flow of goods, the information flow and the financial flow. The literature on Supply Chain Management has concentrated mostly on the two first flows with the financial flow shown the least attention (Pfohl and Gomm, 2009). One of the more prevalent topics has been how the effectiveness in the physical supply chain can improve firm performance. Based on two recent reviews of the SCM literature (Grimm et al., 2015; Kouvelis et al., 2006) the topic of SCM is widely studied with many varying approaches and theories applied. Still, it seems that very little emphasis is put on incorporating the financial flows into the equation: financial supply chains weren't mentioned in either of the reviews. Kouvelis et al. (2006) point to integration as important (the finance function plays a role there) but financial considerations are mostly related to hedging against exchange rate risks in global supply chains (Grimm et al., 2015; Kouvelis et al., 2006).

2.1.1 The impact of Supply Chain Management on the bottom line

Optimising the physical side of supply chain has been on company agendas for a long time and academic literature too has demonstrated the link between better SCM and firm performance. Taking a more holistic view in optimising the physical flow in supply chains and operating in closer collaboration with suppliers and customers helps decrease the total costs of the supply chain (Morgan and Monczka, 1996). A better-performing supply chain affects company valuation favourably (D'Avanzo et al., 2003; Johnson and Templar, 2011). The Economic Value Added (EVA) model links supply chain actions with financial results (Camerinelli, 2009; Losbichler et al., 2008). Cash-to-cash cycle, the time-based measure to evaluate the working capital position of the company, is one of the main constituents in EVA (Losbichler et al., 2008).

When supply chains are more concentrated (a significant portion of sales is to one major customer) cash cycles are improved along the whole supply chain (Lanier Jr. et al., 2010). The higher asset turnover results from more effective use of inventory and more efficient collection of receivables. Concentration doesn't imply supplier integration though (Lanier Jr. et al., 2010). Part of a better-optimised supply chain is closer collaboration, even integration, with suppliers which improves the operations of the chain by reducing the total costs (Morgan and Monczka, 1996). In addition it can result in a cash release as less inventory is required and physical processes are more streamlined (Morgan and Monczka, 1996). Information sharing is essential in achieving a higher level of integration.

2.1.2 Financial decisions in relation to the supply chain

The discussion above shows that efficient Supply Chain Management has an impact on the financial side of the company, but do the financial decisions have an impact on the supply chain performance? Protopappa-Sieke and Seifert (2010) demonstrate this relation by showing that inventory decisions and operational costs are affected by payment delays and working capital policies. A larger amount of working capital decreases operational costs, especially when operating under a very capital-constrained scenario (Protopappa-Sieke and Seifert, 2010). Gupta and Wang (2009) reached a similar conclusion stating that trade credit terms affect inventory policies. Kouvelis and Zhao (2011) found that the choice of financing affects the attained supply chain efficiency. Joint consideration between finance and operations is thus required.

Traditionally companies' financial issues have been seen as a completely separate question to that of managing supply chains. A review of literature on SCM strategic success factors by Tummala et al. (2006) points to this fact. Improving relationships along the supply chain, implementing ICT and re-engineering material flows are considered important for SCM success. Corporate-wide culture and cross-functional communications are recognised as critical in implementing SCM but, again, integrating the financial flows more closely to operations isn't raised as important. Alvarenga (2014) makes the notion that on the one hand CFOs don't show enough interest in supply chains considering how much money is tied in the operations, and on the other hand supply chain managers make decisions without proper understanding on the impact of those decisions on firm performance and financial metrics.

2.1.3 Towards a more holistic view on the supply chain

Lack of coordination between the physical and financial supply chains can have notable implications to business reducing the amount of available working capital and resulting in liquidity problems especially in SMEs (Fellenz et al., 2009). Camerinelli (2009) points out that optimising other aspects

of the supply chain may cause the financial side ending up much less than optimal. Alvarenga (2014) calls for more collaboration between the supply chain management and the financial function. Combining the tools and metrics from the financial side and the operational understanding of SCM teams would yield the best results (Alvarenga, 2014; Wuttke et al., 2013b).

Being able to visualise the supply chain financially is the first step in controlling and improving it (Mathis and Cavinato, 2010). As opposed to the typical approach by a financial manager, Wuttke et al. (2013b) call for less focus on financial risks and more on the actual transactions that happen in conjunction with the financial flows. Banks can have a major role in bridging the gap between the two departments as an external mediator, especially if the functions exist in their separate silos (Silvestro and Lustrato, 2014). In conclusion, more integration is needed between financial and physical supply chains (e.g. Camerinelli, 2009; Fellenz et al., 2009; Mathis and Cavinato, 2010).

Managing working capital is an increasingly big concern for companies (Sagner, 2011) and they are looking for ways too free up cash from the supply chains. Extending payment terms can be fairly effortless for a large buyer with negotiating power, but suppliers need their cash too and oftentimes even more desperately. As a lot of the time suppliers are in a less favourable position to finance their working capital needs they might find themselves short of cash and have to finance themselves using external instruments, for example factoring, which can be costly (Klapper, 2006; Seifert and Seifert, 2011; Soufani, 2000). Forcing extended payment terms thus shows either as increased prices for the buyer or at least reduced quality or service level (Hofmann and Kotzab, 2010). Financial strain on suppliers is one of the key challenges in supply chains (More and Basu, 2013).

Working capital constraints are often passed on upstream in the supply chain (Wuttke et al., 2013b) so in the worst case depleting the first-tier supplier of cash can cripple the whole chain. Having suppliers operate on very tight cash can extort the operations of the supply chain in the longer run resulting in supply chain disruptions (Hofmann and Belin, 2011; Seifert and Seifert, 2011). Instead of myopically trying to optimise their own cash-to-cash cycles companies should think in terms of cash cycles in a more collaborative manner (Hofmann and Kotzab, 2010). The company with the lowest WACC in the supply chain should bear the financing costs by acquiring the longest C2C cycle (Hofmann and Kotzab, 2010).

Between 1995 and 2004 European companies on average weren't able to reduce their cash-to-cash cycles as found out by an empirical study (Losbichler et al., 2008). Losbichler et al. (2008) state that "this may be because the most influential party in the supply chain optimises its cash-to-cash cycle

time performance at the expense of other supply chain partners, not fulfilling the full financial potential of supply chain management". Randall and Farris II (2009) and Pfohl and Gomm (2009) demonstrate the benefits of taking a holistic view on the whole supply chain instead of focusing on optimising the financial variables of the individual company. By extending favourable financing terms the most creditworthy company can improve the performance of the whole chain. Again, the effects are not limited to just a single node in the supply chain. Similar to cash constraints, increased liquidity is transmitted higher up the supply chain as well (Wuttke et al., 2013b).

2.2 Financial Supply Chain Management

Financial Supply Chain Management (FSCM) could be thought of as an extension of both working capital management and Supply Chain Management. On the one hand, as opposed to traditional working capital management, FSCM takes a more holistic view on the financial flows across the entire supply chain. Then again, FSCM puts more emphasis on the interplay of physical and financial supply chains than the traditional SCM. One of the earliest discourses about the role of financial supply chains comes from Stemmler (2002) who names the practice "supply chain finance". For Stemmler (2002) "supply chain finance is not a new product", but the philosophy that financial flows should be considered as a more integral part of the practice of Supply Chain Management.

Wuttke et al. (2013b) define Financial Supply Chain Management as "optimised planning, managing, and controlling of supply chain cash flows to facilitate efficient supply chain material flows". The key here is to facilitate material flows by improving the financial position of companies in the supply chain. The result is a better sustained and improved supplier base (Wuttke et al., 2013b). This practice is a clear distinction from simply managing exchange rate risks described earlier.

FSCM strategies are put to action in contractual agreements and the actual financial flows are manifested in payments along the chain (Hofmann, 2005). Based on the actual transactions that happen in business Wuttke et al. (2013b) propose a division between *pre-shipment* and *post-shipment* (upstream) Financial Supply Chain Management. With pre-shipment financing a buyer can cover the costs for a supplier's raw materials, for example. Post-shipment financing takes place after the actual product or service is delivered. As an example any form of advance involving the invoice falls under post-shipment financing making reverse factoring and Supply Chain Finance part of that category (Wuttke et al., 2013b). For example Silvestro and Lustrato (2014) adopt the same pre-shipment/post-shipment dichotomy.

Management of working capital is more and more cross-functional (Sagner, 2011) and Supply Chain Management involves many stakeholders (e.g. Tummala et al., 2006). Naturally from this follows that Financial Supply Chain Management is a cross-functional discipline as well. In addition to the members of the physical supply chain – production, logistics and procurement as well as suppliers – Financial Supply Chain Management requires the engagement of the finance function to identify different funding alternatives in different parts of the supply chain (Alvarenga, 2014). If financing instruments are used an external financing partner (often a bank) can be added as another stakeholder. The number of stakeholders is thus high (Protopappa-Sieke and Seifert, 2010; Wuttke et al., 2013b).

2.2.1 Integrating the different supply chains and supply chain members

The existing literature has identified information sharing (Hofmann and Kotzab, 2010; Randall and Farris II, 2009; Stemmler, 2002), supplier integration (Pfohl and Gomm, 2009) and intra-company collaboration (Alvarenga, 2014; Fellenz et al., 2009; Stemmler, 2002) as important measures to take in order to better integrate the physical and financial supply chains. Post-shipment Financial Supply Chain Management practices are more likely to be successful when there is a higher level of interdepartmental interaction and collaboration (Wuttke et al., 2013b). As opposed to pre-shipment FSCM, where only interaction is necessary, close collaboration benefits Supply Chain Finance because the solution is closely linked to everyday actions. Collaboration is more beneficial because then it is more likely that the goals of the two functions are aligned. Also knowledge transfer is facilitated (Wuttke et al., 2013b).

Wuttke et al. (2013b) observed a close link between information sharing, supplier integration and cash flow risk. Information sharing and supplier integration therefore have a favourable impact on the performance of the financial supply chain at least from the risk perspective. The model supports the notion that "managers need to understand the working capital situations in their supply chain in order to decide whether to engage in FSCM" (Wuttke et al., 2013b). Pfohl and Gomm (2009) conclude that "SCF is more beneficial for companies that are strongly integrated within the supply chain and have a high level of cooperation or collaboration".

The role of banks as an external partner in financing supply chains is two-fold. On the one hand they can act as a valuable mediator between functions and companies in addition to their natural role of providing financing. On the other hand, because they are not part of the supply chain, they have limited visibility to the business transactions and thus can't judge the associated risk in the same way as members of the supply chains. As noted by Gomm (2010) information about the risk of an asset in the supply chain can be used to optimise financing. Generally speaking the risk of the

asset isn't the same as the risk of the company in the default sense since it is likely that the asset will get sold because is corresponds to a need in the chain (Gomm, 2010).

Companies in the chain know the underlying transactions better and thus have an advantage over external financing parties (Gomm, 2010). Coordinating credit terms together offers supply chain participants opportunities to realise cost savings (e.g. Hofmann and Kotzab, 2010; Stemmler, 2002). By extending the classical cash-to-cash and weighted average cost of capital variables from intra-firm to the whole supply chain benefits all parties, if increased collaboration and sharing of financial position follow. Increased collaboration can result for example in shifting inventories and adjusting payment terms to improve the profitability of the whole chain (Randall and Farris II, 2009). Inventory carrying costs, as well as financing payment terms, should move towards the supply chain partner with the lower cost of capital (Randall and Farris II, 2009). As noted before the company with the lowest cost of capital in the supply chain should bear the financing costs by acquiring the longest cash-to-cash cycle (Hofmann and Kotzab, 2010). Companies can make use of this financing arbitrage only if a sufficient level of collaboration is in place.

2.2.2 The role of external partners

Banks lack the information the supply chain members have but they are still key partners in managing the chains. Companies can take measures to alleviate this information asymmetry in order to decrease the risk exposure of the financing partner which can result in a lower cost of financing (Stemmler, 2002). In reality companies might not be that advanced in managing information even with their suppliers and customers. Information still typically lies within silos in individual companies without a holistic view on the whole supply chain (Fellenz et al., 2009). There's a need for a trusted third party player to facilitate the information sharing and collaboration between companies. This could be the banks, at least according to Silvestro and Lustrato (2014).

Banks can act as a facilitator in supply chain integration in many ways. First of all they have a number of products to help in supply chain coordination by making the chain more synchronised, such as electrical invoicing, trade platforms and reconciliation databases (Silvestro and Lustrato, 2014). Banks can act as mediators to help the collaboration between buyers and suppliers, but also between functions in companies. They can, with the help of the appropriate technology, improve information sharing and information visibility in supply chain creating a better functioning whole. This way banks can help address the information asymmetry present in supply chains (Silvestro and Lustrato, 2014). This new and deeper involvement in the business of customer companies requires the banks to change their mind-set about the level of the relationship. Bridging the gap between

finance and operations means becoming more oriented towards the business transactions of the customer (Fellenz et al., 2009).

Many of the tools that are used to manage financial supply chains in practice include an external financing partner. Factoring is one of the more common ways to finance working capital (Klapper, 2006; Sagner, 2011; Soufani, 2000), though it doesn't require participation from any other supply chain partners. A comprehensive list of ways to manage the financial supply chain is provided by Wuttke et al. (2013b). These include inventory financing, letters of credit, reverse factoring and Supply Chain Finance.

2.2.3 The benefits of Financial Supply Chain Management

Benefits of a holistic approach to the management of cash flows and financing costs in the supply chain are undisputable. Increased information sharing and collaboration result in cost reductions (e.g. Pfohl and Gomm, 2009; Stemmler, 2002) but also increased profits for the supply chain (Randall and Farris II, 2009). Extending favourable credit terms to less creditworthy members in the supply chain can be very beneficial for the whole system. For example, by being able to decrease the *cash flow risk* of the supplying company the buying company can decrease its own *supply chain disruption risk* (Wuttke et al., 2013b). This is exactly what for example Unilever did with its suppliers (Seifert and Seifert, 2011). More anecdotal evidence suggests that major benefits can be achieved with financing the supply chain. Ying (2012) cites the success of Yongan Corporation who increased their sales four-fold over three years with the help of supply chain finance (Ying, 2012). The conclusion that can be drawn is that supply chain finance is more beneficial for the supply chain than bank financing (Kouvelis and Zhao, 2011; Wang et al., 2012).

Pre-shipment FSCM strengthens the suppliers' working capital, whereas post-shipment FSCM strengthens the buyers' working capital (Wuttke et al., 2013b). So if the buyer's working capital position is good it prefers the pre-shipment because it doesn't need the working capital boost but is able to increase the operational performance and health of the supply chain.

2.2.4 Academic approaches to Financial Supply Chain Management

Mathematical modelling of the financial supply chain has sought to shed light on what kinds of arrangements are profitable and to which supply chain members. Typically research focuses on two or more supply chain partners. Gupta and Dutta (2011) formulated a dynamic heuristic model on when to pay invoices and how to manage cash. In the model of Wang et al. (2012) the large supplier uses his creditworthiness to get lower loaning rates for the down-stream companies. They show that finance acquired this way is cheaper than a bank loan. In the same fashion Pfohl and Gomm (2009) consider a model where the supplier provides financing for a project downstream. The

supplier has better information about the project than the bank and can thus offer financing on a more favourable rate. Moussawi-Haidar et al. (2014) study a setting where a buyer, a supplier and a bank find common benefits through a coordinated supply chain. (Gupta and Dutta, 2011; Moussawi-Haidar et al., 2014; Pfohl and Gomm, 2009; Wang et al., 2012)

As a deviation from the quantitative modelling that has been the prevalent approach in the existing literature covering Financial Supply Chain Management, Wuttke et al. (2013b) study the subject in a qualitative manner. They categorise FSCM practices in companies and create a theory and a framework based on the Strauss and Corbin paradigm framework (Strauss and Corbin, 1990), with which they summarise their findings. They take an upstream perspective on the supply chain, which is a very similar approach to my research. However, their explorative study covers all possible FSCM practices whereas this study focuses on the Supply Chain Finance solution specifically. The results of Wuttke et al. (2013b) are thus applicable to my study as well, at least to the extent that they touch on the post-shipment FSCM.

According to Wuttke et al. (2013b) a weak working capital position leads to focus in FSCM. Similarly a “higher pooled supplier dependence enhances the utilisation of FSCM" i.e. the more dependent the buyer is of its suppliers the more likely it is to utilise FSCM practices. The other mediating factor is the extent to which the dependence is *dispersed*. If the dependence is highly dispersed (i.e. there is a large number of suppliers), then the buyer company prefers post-shipment practices. Strategy of reducing dependence, i.e. keeping an arm’s-length relationship to suppliers, leads to low pooled dependence and thus leads to low levels of FSCM practice usage (Wuttke et al., 2013b). Dependence from the buyers’ point of view could be seen as corresponding to supply chain concentration from the supplier perspective, as discussed by Lanier Jr. et al. (2010).

2.2.5 Credit arbitrage and Supply Chain Finance

While he talks about financial supply chains in the broader sense, Stemmler (2002) does recognise that accounts receivable management provides arbitrage opportunities in the form of accelerated payments. One specific solution to address this credit arbitrage (Pfohl and Gomm, 2009; Randall and Farris II, 2009; Stemmler, 2002) and the focus of this thesis is Supply Chain Finance (SCF). Supply Chain Finance is a solution for the upstream post-shipment Financial Supply Chain Management (Wuttke et al., 2013b). As discussed above post-shipment solutions are used to address the weak working capital position of buying companies. In the case of large buyer companies this typically means decreasing the assets that are tied in accounts payable by facilitating the extension of payment terms towards suppliers. In the next section I’ll drill more deeply into the literature that is dedicated to this particular type of Financial Supply Chain Management practice.

2.3 SUPPLY CHAIN FINANCE

There are a number of drivers that are paving the way for a more wide-spread use of supply chain finance solutions including globalisation, increased focus on SCM and new technologies that automate transactions and increase visibility to cash flows (Hofmann and Belin, 2011). Still the field of Supply Chain Finance is fairly new to the business and academic worlds alike. The solution has gained increasing attention during recent years and is addressed by a growing body of literature. The methods that have been applied have so far been mostly quantitative, but recently some qualitative approaches have been taken as well (Wuttke et al., 2013a). At the same time the study on the financial benefits of the solution has been joined by the question of adoption.

As a reminder Supply Chain Finance (capitalised) here refers to the solution that is similar to reverse factoring and sometimes used synonymously. Supply chain finance (un-capitalised) covers the whole set of possible financing solutions in the domain of Financial Supply Chain Management.

2.3.1 Varying terminology

As mentioned in the introduction the interpretations of the term "supply chain finance" are many. One of the prevalent meaning the term gets is the broad concept of managing financial flows in a supply chain (e.g. Dello Iacono et al., 2015; Fellenz et al., 2009; More and Basu, 2013; Pfohl and Gomm, 2009; Silvestro and Lustrato, 2014). For Stemmler (2002) even just electronic handling of payments is "supply chain finance". The other possible interpretation of the term is the particular financial instrument (Wuttke et al., 2013a, 2013b) referred to here, capitalised, as Supply Chain Finance (SCF). The definitions overlap to some extent, as Supply Chain Finance as the solution is considered a part of the possible facilities to be used as part of wider interpretation of supply chain finance. Practitioners tend to refer to Supply Chain Finance as the solution (Kerle, 2009).

Some of the solutions in the current literature are buyer-centric (Dello Iacono et al., 2015; More and Basu, 2013; Tanrisever et al., 2015, 2012) while others are initiated by the supplier (Kouvelis and Zhao, 2011; Pfohl and Gomm, 2009). Others take the whole supply chain into account (Gupta and Dutta, 2011; Wang et al., 2012; Wuttke et al., 2013b). The main message still remains the same: the one with the better credit rating provides financing to the other players in the chain.

The distinction between upstream and downstream financing is very relevant in the context of this study because the solutions differ very much in the way they are adopted, depending on whether the solution is directed towards customers or supplier. As Wuttke et al. (2013a) state, customers typically ask and even request for innovations. When looking to disseminate an innovation upstream, however, the buyer companies have to consider the trade-off between enforcing the

solution and good long-term relationships. If buyer companies exercise their negotiation power too much it can have a detrimental effect on supplier relationships. Another challenge is that the sales power in companies is focused downstream, meaning the competencies for communicating the innovation is stronger in that direction. For supplier managers this kind of approach can be totally new because they are typically the ones being sold to. Benefits from the upstream innovation are realised only after a sufficient amount of suppliers is onboard (Wuttke et al., 2013b).

It has become evident that the usage of the term to describe the broader concept is more popular among the papers that were reviewed for this study. Other studies addressed reverse factoring (Tanrisever et al., 2015, 2012; van der Vliet et al., 2015) that clearly falls under the supply chain finance umbrella, but in the case of those authors isn't called Supply Chain Finance. Wuttke et al. (2013a, 2013b) take a step in a more granular direction and separate between reverse factoring and Supply Chain Finance. To them reverse factoring covers "specific suppliers in specific countries". This is in line with Camerinelli (2009) who sees reverse factoring as a solutions typically used in emerging markets. SCF, on the other hand, is described by Wuttke et al. (2013a, 2013b) as automated and to potentially encompass the entire supplier base of the focal company.

The distinction above seems justified because there is a difference between the solutions that are based on factoring and those that make use of external system integrators who make use of advanced technologies to transfer the invoice material in order to make the solution more flexible and more widely applicable. This distinction can have practical implications in the light of this study and I will therefore adopt this definition. The working principles of reverse factoring and Supply Chain Finance are identical in how the invoices are accepted by the buyer and discounted by the financing partner. The difference comes from the flexibility and the scope of suppliers that are included.

2.3.2 The value of Supply Chain Finance

One of the pioneering lines of research in supply chain finance is that of its value. The benefits of supply chain finance are well articulated in trade publications on a qualitative level but have so far attained limited academic validation. In a survey conducted by Seifert and Seifert (2011) buyer companies reported being able to reduce their working capital on average by 13% using reverse factoring, whereas suppliers managed to reach a reduction of 14% (Seifert and Seifert, 2011). From a more academic approach, value estimation of reverse factoring has seen some pioneering work from Tanrisever et al. (2015, 2012) who were the first to rigorously analyse the value of reverse factoring in their two publications, as well as van der Vliet et al. (2015) who expanded on the model of the former. The studies quantify the value for each participant, the buyer and the supplier.

Tanrisever et al. (2015, 2012) used a single period model which was later expanded by van der Vliet et al. (2015) to include multiple periods as well as both auto and manual discounting.

The principle idea in a reverse factoring arrangement is that everybody wins. The buyer benefits from extended payment terms and even decreased prices (Seifert and Seifert, 2011) and the supplier gains from finance arbitrage as well as increased liquidity. The positive effects of increased liquidity are beneficial further up the supply chain too, as the first-tier suppliers have more flexibility and thus don't necessarily have to delay payments to their suppliers (Wuttke et al., 2013b). The bank naturally gains from the fees and the margins it charges. However, when considering the benefit distribution in a buyer-supplier dyad the equation might not be that straightforward when keeping in mind that the financial and operational decisions of a company are interrelated (van der Vliet et al., 2015).

Value generation from using reverse factoring is estimated to be between 2-10 percent (Tanrisever et al., 2015, 2012) but under certain conditions. Tanrisever et al. (2015, 2012) conclude that the maximum benefits for the chain are achieved when payment terms are not extended in which case the supplier receives the maximum benefits and the buyer just breaks even. As mentioned the buyer profits only if the payment terms are extended but in that case part of the total benefit is lost due to the non-linear relationship between payment term extensions and the benefits of the supplier. Payment term extensions are thus inefficient as they waste part of the benefits of reverse factoring (Tanrisever et al., 2015, 2012; van der Vliet et al., 2015). Suppliers decreasing prices isn't considered as an option, even though it could be a straightforward way to distribute the benefits between supply chain partners (Randall and Farris II, 2009). However, because price decreases are harder to negotiate adjustments in payment terms could be more feasible in practice (Tanrisever et al., 2015, 2012).

Keeping in mind that Supply Chain Finance (like reverse factoring) is to a large extent about being able to extend the payment terms of the buying company the inefficiency of extending payment terms is an interesting conclusion. It is after all the buyer who is the initiator and without doubt wants to get the working capital benefits from the facility too. Then again the effects of the payment term extension on the supplier are essential because there isn't much benefit from the arrangement without supplier participation.

The assumption generally is that the capital rate of reverse factoring is lower than the cost of capital of the supplier and that the financing cost increases linearly with extending payment terms. In that case it would be reasonable for the supplier to always participate and auto-discount its invoices.

However, van der Vliet et al. (2015) argue that even the existence of manual discounting suggests that the dynamics between the payment term and the related costs is more complex than what it seems. This dilemma for the supplier stems essentially from two sources: the notion of stochastic demand and the opportunity cost for holding receivables.

Tanrisever et al (2015, 2012) and van der Vliet et al. (2015) argue that under stochastic demand the relationship between extended payment terms and the financing rate for the supplier isn't straightforward. Van der Vliet et al. (2015) demonstrate that even without any opportunity costs the benefit of reverse factoring for the supplier doesn't diminish in a linear fashion. This non-linear increase in financing costs is due to increased uncertainty in cash flows (van der Vliet et al., 2015). An analogy is made to cash flows where the payment term is considered to be the lead time. Stochastic inventory theory states that longer replenishment times require more safety stocks (Tanrisever et al., 2015, 2012; van der Vliet et al., 2015). Similarly Stemmler (2002) observes that longer payment terms increase the risk related to the receivables which increases the risk premium in the interest rates.

From the supplier's point of view, in addition to the financing costs, there's an opportunity cost to holding on to receivables longer as a result of longer payment terms. This is a situation similar to holding cash. The opportunity cost stems from returns lost by having cash tied up in receivables. Van der Vliet et al. (2015) study the trade-off between financing costs and payment times and conclude that an accurate determination of the opportunity costs is essential in making decisions about payment term extensions. Similarly to Tanrisever et al. (2015, 2012), Van der Vliet et al. (2015) don't take the opportunity cost to be the cost of capital of the supplier company, as opposed to for example Randall and Farris II (2009). According to van der Vliet et al. (2015) "making payment term decisions based on the expected working capital changes will not account for the dynamics of stochastic inventory operations and their interaction with financing requirements".

The opportunity cost is probably equal or lower than the cost of reverse factoring (van der Vliet et al., 2015). When the opportunity cost is equal to the cost of discounting the decision is quite trivial and auto-discounting is used. If the opportunity cost was any higher the outcome would be similar. If the opportunity cost is lower than the cost of discounting, however, the supplier company has to make considerations about their current cash needs and the decision becomes more complex and manual discounting should be used. In that case the decision is less than trivial because again, when extending payment terms, the supplier bears both the opportunity cost for additional receivables and the cost of uncertainty in cash flows (van der Vliet et al., 2015).

Van der Vliet et al. (2015) conclude that in many of their scenarios the opportunity costs can't exceed 0,5 percent in order for a payment term extension to be feasible so that the financing costs for the SME don't exceed those of external borrowing. Since this is the cost at which the supplier would have to be able to borrow money it's not really realistic. Assuming that the opportunity cost for holding receivables is lower than the cost of reverse factoring is against the common intuition, but "the presumption that a firm assesses its opportunity cost rate for holding receivables at a rate equal to or higher than the reverse factoring rate can […] be deceiving in terms of value creation" (van der Vliet et al., 2015).

Van der Vliet et al. (2015) imply that payment term extension decisions can't be made independent of operational decisions. Overly extending the payment periods may help the buyer in the short term, but it affects the supplier's operations and financial position. As the payment period increases the SME has to bear the financing costs over a longer time period but it is also more likely that its cash will be depleted and it has to resort to external funding. Remember that the demand is stochastic so a large spike in demand for an already backlogged supplier could mean some serious issues with liquidity.

In conclusion, stretching payment terms wastes some of the benefits for the system and might even end up affecting the whole supply chain if the supplier runs into trouble i.e. the risk of supply chain disruptions is increased (Tanrisever et al., 2015, 2012). A similar conclusion was made before, but there the payment terms were extended without any credit term sharing between the companies. At least from a theoretical point of view, when considering only financial benefits, extension of payment terms can thus be problematic. Nonetheless, it shouldn't be forgotten that there are a number of other benefits that could motivate both the buyer and the suppliers to participate in a Supply Chain Finance program.

2.3.3 Additional benefits from Supply Chain Finance

The most concrete, and at the same time the most discussed, benefits of implementing reverse factoring and similar solutions are related to the working capital positions of buyers and suppliers alike. As the total benefits from extending payment terms can be a bit questionable it's good to note that there are other upsides to such an integrative solution as well. Buyers might indeed have other motivators than just money to implement supply chain finance solutions such as improving supplier relationships (Dello Iacono et al., 2015; Seifert and Seifert, 2011) or streamlining processes (Dello Iacono et al., 2015), standardisation of payment terms (Seifert and Seifert, 2011) as well as reduction of prices (Seifert and Seifert, 2011). Additional benefits include increased information

sharing (Pfohl and Gomm, 2009) and decreased risks, both related to cash flows and supply chains (Wuttke et al., 2013b).

If we want to speculate on the attractiveness of Supply Chain Finance and its adoption the approach taken by for example Tanrisever et al. (2015, 2012) is limited because of two things. First, they don't consider any of the external benefits that might results from SCF. Second, they only consider a single buyer-supplier dyad. In a larger picture the goal of the buyer is usually to include a larger number of suppliers in order to achieve a more sizeable decrease in working capital. Whether the possibility to extend payment terms is limited or not, with more suppliers the effect is bound to be more significant. Tanrisever et al. (2015, 2012) acknowledge the implementation costs of one buyer-supplier pair but they leave it at that. Connecting additional suppliers to a reverse factoring facility is probably less expensive than the initial implementation, for example because of the learning effects (Dello Iacono et al., 2015). With more suppliers the benefit for the buyer increases, the new supplier gets the same benefits as the previous one (depending on spend of course) and the banks get more potential profit as well. Indeed, in approaching the question about the adoption process of SCF we have to look beyond the evident direct benefits, as Dello Iacono et al. (2015) show.

2.3.4 Antecedents of Supply Chain Finance benefits

Many of the previous studies have identified a wide range of antecedents that affect the benefits that can be derived from a Supply Chain Finance/reverse factoring type facility. When addressing the question of adoption of supply chain finance solutions it's important to understand the factors that affect the benefits and thus the attractiveness of the solutions.

Tanrisever et al. (2015, 2012) found that a lower risk-free rate gives buyers less incentive to offer reverse factoring when the buyer invests its retained cash on that rate. Thus when interest rates are low buyers are not likely to initiate programs (Dello Iacono et al., 2015; Tanrisever et al., 2015, 2012). The benefits for the supplier depend on the spread of external financing costs between the firm and the corporation as the supplier gets access to cheaper finance via the buyer (Tanrisever et al., 2015, 2012). This is essentially the extent of the credit arbitrage. During favourable economic conditions when cash is abundant suppliers are less willing to discount (Dello Iacono et al., 2015).

Most promising industries for reverse factoring are those with low margins and financing difficulties for suppliers (Dello Iacono et al., 2015). Suppliers in financial difficulties take all the financing they can get and automatically discount their invoices. The benefits for the financing bank depend on the discounting activity of the supplier which in turn depends on the market conditions, notably whether there is high or low demand (Dello Iacono et al., 2015). The direct benefits of reverse

factoring depend on the receivables volumes i.e. spend, the extension of payment terms and the cost of money (Dello Iacono et al., 2015). The longer the original payment term, the larger the benefits from reverse factoring (Tanrisever et al., 2015, 2012; van der Vliet et al., 2015).

Volatility of demand plays a role as well. On the one hand greater volatility in demand allows for more extension in the payment term when there is an opportunity cost (Tanrisever et al., 2015, 2012). On the other hand when the opportunity cost is negligible greater volatility in demand allows for less extension in payment terms (van der Vliet et al., 2015). Suppliers with more aggressive working capital policies benefit more from the solutions and are thus more likely to use it. An aggressive working capital policy entails lower cash reserves and higher short-term liabilities in relation to the volatility of demand (Tanrisever et al., 2015, 2012).

From a bank's point of view the attractiveness of reverse factoring arrangements depends on the discounting behaviour of the supplier side, which in turn depends on various market conditions (Dello Iacono et al., 2015). Dello Iacono et al. (2015) name "word-of-mouth" as important for the banks. The role of the bank's track record in initiating new reverse factoring arrangements is easy to understand when thinking about the scale of the solution. The credibility of SCF providers is deemed important by Wuttke et al. (2013a) as well, them noting that "it is plausible that for all firms trust is an important attribute for innovation dissemination". This implies that banks that the suppliers haven't worked with before might have a harder time convincing them of the superiority of the solution. The market potential for banks depends on competition from other service providers as well (Dello Iacono et al., 2015).

2.3.5 Adoption of Supply Chain Finance

Supply Chain Finance hasn't seen huge boom despite its theoretical benefits and a number of global success stories (Camerinelli, 2013; Seifert and Seifert, 2011). There could be many reasons for this. For example, managers probably realise that the market isn't static but the underlying conditions may change (Dello Iacono et al., 2015). Dello Iacono et al. (2015) are the first to model the link between the direct benefits for supply chains and the surrounding market conditions. The authors use system dynamics as their theoretical foundation. The basic principle is that in order for the solution to thrive, quite naturally, the arrangement has to be beneficial for each party (Dello Iacono et al., 2015). Wuttke et al. (2013a) approach the adoption process from the organisational viewpoint, applying the innovation adoption framework by Rogers (2003). The study by Wuttke et al. (2013a) is covered in more detail in the next section.

In trying to answer my research question the key is not to consider only the benefits or the value that can be derived from using Supply Chain Finance (or any supply chain finance solution for that

matter) but also the challenges and obstacles that exist in the way of companies choosing to implement it. The first article to address these challenges was by More and Basu (2013). The authors take the broader view on supply chain finance but the challenges identified are universal enough to be applicable to the specific solution as well.

The core challenge according to More and Basu (2013) is lack of common vision among the supply chain partners which means that the cash flows within the chains aren't coordinated on a sufficient level, indicating a lack of effort in Financial Supply Chain Management. One way the lack of coordination in the supply chains shows is more disputed invoices (claims) leading to unnecessary costs (Fellenz et al., 2009). An uneven distribution of power in the supply chain could be one underlying cause in the lack of coordination as powerful companies are in a key role in coordinating the supply chain, but at the same time they are likely to get their own way when it comes to negotiating payment terms, for example (Hofmann and Kotzab, 2010).

When the financial supply chain isn't coordinated enough, despite the negotiating power of the buyer, common benefits are hard to achieve. Firstly, powerful companies exploiting payment terms on purpose and practically using their suppliers' balance sheets to finance themselves creates a barrier for improving the payment process (Fellenz et al., 2009). Then again, if the buyer company has a weak influence on its suppliers it might not be able to enforce new practices involving those suppliers (Wuttke et al., 2013a). This discussion underlines the role of the powerful focal company in coordinating the financial supply chain and initiating supply chain finance solutions. The focal company has to be able to offer other participants financial benefits too. If the buyer company isn't creditworthy enough it can't leverage the spread in financing costs in an SCF facility (Wuttke et al., 2013a).

Lack of automation in payment processes, as well as the lack of coordination, is related to the inadequate technology used by companies (Fellenz et al., 2009; More and Basu, 2013). Lack of automation can cause delays in financial transactions (Fellenz et al., 2009; More and Basu, 2013) and is partly caused by a lack of knowledge and training in supply chain finance (More and Basu, 2013). More and Basu (2013) observed that by offering appropriate training on supply chain finance the lack of knowledge and information could be solved which in turn affects the automation of payment process in a favourable way. When it comes to new information systems, past failures with IT implementations could lead to scepticism about new technologies (Fellenz et al., 2009).

There can be a lack of interdepartmental collaboration too and not just between supply chain partners (Alvarenga, 2014; Camerinelli, 2009; Silvestro and Lustrato, 2014). Collaboration between

departments is important because of the combined skillset required to carry out an SCF implementation (Wuttke et al., 2013a). This is an important notion as in many other studies (Protopappa-Sieke and Seifert, 2010) the link between finance and procurement or other operational managers seems to be communicative at best in the sense that financial goals set by the finance function are communicated to operations and they are expected to act accordingly.

Lack of financial competencies in supply chain managing functions (Hofmann, 2005; Wuttke et al., 2013b) could be overcome with more interaction and collaboration between functions. Supplier onboarding can prove to be challenging since procurement managers or category managers don't typically have the required marketing or selling skills, or even understanding of the solution (Alvarenga, 2014; Wuttke et al., 2013b) to disseminate it efficiently.

The assumption of Dello Iacono et al. (2015) is that it's the bank who bears all the costs. If there are related costs to buyers and suppliers too, the market development is constrained (Dello Iacono et al., 2015). High cost of integration can result in companies continuing to act as before, ignoring the benefits of a better coordinated supply chain (More and Basu, 2013). Direct and indirect costs, i.e. legal contracting, training programs and investment in IT, can potentially undermine the direct benefits of reverse factoring (Tanrisever et al., 2015, 2012). Implementing Supply Chain Finance does indeed take a lot of time and resources, as noted by Wuttke et al. (2013b).

The barriers can be on the banking side as well as a lack of third party financing is one of the key challenges in financial supply chains (More and Basu, 2013). It could be due to banks' incapability to comply with regulation (notably KYC, Know Your Customers) and on the other hand their unwillingness to cannibalise their existing businesses (Camerinelli, 2013; Fellenz et al., 2009). There are also solutions that are much more straightforward and profitable for banks, such as factoring. Furthemore, the banking system is heavy and the banks' technologies fall short of those used by corporations (Fellenz et al., 2009).

The economic conditions after the financial crisis of 2008 could certainly be characterised as exceptional in the sense that demand surged and banks were suddenly much less willing to offer financing. It has been stated that the recent market conditions have paved the way for supply chain finance solutions (Hofmann and Belin, 2011). Some even speculated that the financial crisis could act as a catalyst for an even more wide-spread and fundamental change in the way financial supply chains are handled (Fellenz et al., 2009). Next we'll take a look at how exceptional market conditions, on theoretical grounds, should affect the attractiveness of Supply Chain Finance.

In an economic crisis the credit spread between larger (buyer) companies and smaller (supplier) companies tends to widen, which makes reverse factoring more attractive (Tanrisever et al., 2015, 2012). Empirical evidence suggests that suppliers did indeed appreciate Supply Chain Finance especially during the financial crisis, according to Wuttke et al. (2013b). On the contrary, Dello Iacono et al. (2015) concluded based on their simulation that during exceptional market conditions, where both demand and interest rates are low, reverse factoring would rather be unattractive for suppliers. This would again translate to unattractiveness for buyers and banks as well which would cut the amount of new programs that are initiated. The drop in interest would mostly be due to the drop in demand and spend of companies. In fact the usage of debtor finance products is growing and for example factoring is becoming more widespread as banks are expected to take a bigger role in helping companies manage their working capital after the crisis (Silvestro and Lustrato, 2014).

2.4 INNOVATION ADOPTION IN ORGANISATIONS

The other main stream of research that is relevant to this study is innovation adoption in organisations. The approach is relevant as supply chain finance solutions can be considered innovative (More and Basu, 2013; Wuttke et al., 2013a). For companies it's a new practice and adopting it calls for its own kind of processual framework which "identifies the main sequence of decisions, actions, and events in this process" (Rogers, 2003). The angle of innovation management in Supply Chain Finance has been applied before by Wuttke et al. (2013a). The upsides of using a stage model include the possibility to categorise the case companies in a more meaningful way than just to users and non-users (which was my original categorisation before finding the framework, by the way).

Wuttke et al. (2013a) concentrate on the implementation sub-process of Rogers' (2003) framework, extending it meritoriously. The study at hand is concerned with the two first steps of the model leading to the decision to implement. By doing so this study can contribute to academia by filling in the steps that were left out of closer scrutiny in the previous study. The first two stages in the innovation make up the initiation sub-process, defined as "all of the information gathering, conceptualisation, and planning for the adoption of an innovation, leading up to the decision to adopt" (Rogers, 2003). The two stages are outlined below.

2.4.1 Agenda-setting

On the one hand agenda-setting is about identifying and prioritising needs and problems in an organisation. When there's a mismatch between a company's aspiration and the current state of things there's a *performance gap*. A performance gap could for example be a realisation that the company could improve on their working capital management which could lead in a working capital

project taking place. This way a performance gap can trigger the innovation process as one or more members identify an important problem and a potential innovation to address it. The agenda-setting is continuous process as new challenges arise in the organisation all the time and priorities are set for those requirements. This process may require a long time. (Rogers, 2003)

As a concurrent activity during the agenda-setting there is an ongoing search for innovations of potential usefulness. Then again the process can work the other way around as well: innovations can also be searched without a recognised problem in mind. Typically companies have so many problems that an innovation is likely to answer to one of them. So on the other hand it could well be that getting to know a new innovation launches the innovation process. (Rogers, 2003)

2.4.2 Matching

In the Matching stage the agenda of the company is conceptually fit with the innovation. Members of the organisation try to determine the suitability of the innovation to solving the needs on the agenda. The stage consists of anticipating the benefits and the problems that might occur in the implementation phase. In case the innovation finds a home within the organisation it's likely to be sustained even in the longer run. In this sense this stage in the process is of great importance. The Matching stage is concluded with a decision to either implement or reject the innovation. (Rogers, 2003)

2.4.3 Managing the innovation adoption of Supply Chain Finance

The adoption process of Supply Chain Finance is rather underexplored. Whereas the vast majority of the existing studies focus on modelling the solution and the interdependencies between operations and financial constraints, Wuttke et al. (2013a) set out to answer the question on how buyers adopt SCF and why some are more effective than others. Very few studies address this issue, but the study takes a very similar approach to what this thesis aims to do. Therefore I deem this study to be my most important reference and take a moment to explain their approach as well as the main findings of the study in a bit more detail.

In the paper the interrelated adoption processes of buyers and suppliers are studied with the focus on the buyer viewpoint. The authors interviewed procurement and logistics managers as well as finance managers, which is appropriate considering the cross-functional nature of the solution. There are various motivators (agendas) that lead the adoption process in buyer companies, but Wuttke et al. (2013a) observed that in particular both operational (logistics) and finance incentives had to be aligned with respect to working capital. Wuttke's et al. (2013a) findings indicate that companies choosing to implement SCF have to have both working capital optimisation and supplier management on the agenda. The three important categories to conceptually shed light on the

beginning of the adoption process were found to be *organisational culture*, *uncertainty avoidance* and *lack of top management commitment*.

Wuttke et al. (2013a) expand on the Rogers' (2003) framework for organisational innovation adoption on the part of the implementation. The expanded framework can be found in **Figure 3** below. More specifically, they find that *restructuring* (changing the organisation to fit the innovation) and *redefining* (changing the innovation to fit the organisation) are closely related to each other, and are mediated by *cross-functional collaboration* and *supplier involvement*. *Dissemination*, in addition to *clarifying*, is an essential step in the adoption process after restructuring and redefining have taken place. As opposed to a typical innovation the adoption of SCF depends to a large extent on the ability to disseminate it to the supplier base. Dissemination is facilitated for the buying company by SCF leverage (credit rating, a company-specific attribute) as well as the relationship strength (specific to the buyer-supplier relationship).

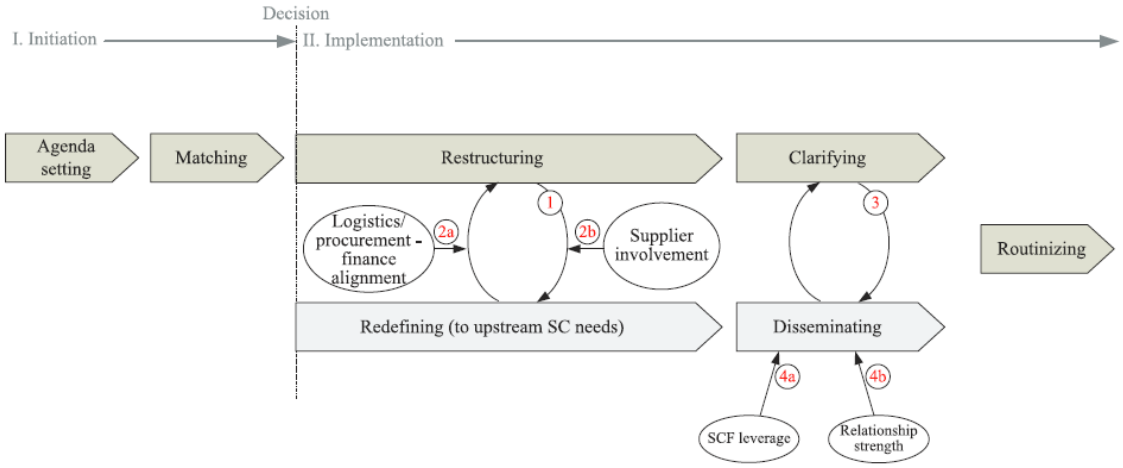

Figure 3 The extended Supply Chain Finance adoption framework by Wuttke et al. (2013a)

This is the main theoretical framework and the starting point of this study. The aim is to be able to elaborate on the beginning of the adoption process i.e. expand on the steps that take place before the decision to implement, namely the sub-process of initiation and the stages of *Agenda-setting* and *Matching*.

2.5 FURTHER PATHS OF RESEARCH IN SUPPLY CHAIN FINANCE

The academic literature about supply chain finance solutions, notably reverse factoring and Supply Chain Finance, is still in its infancy. On the one hand this implies a limited amount of insights that can be drawn from the existing literature. On the other hand there is much room for further research to address the topics that have so far received very little attention. Fellenz et al. (2009)

call for more research on solutions that address the issues related to the improvement of financial flows (such as Supply Chain Finance). So far reverse factoring hasn't been studied in a truly global setting and further research is called for international settings with exchange rate risk and interest rate risk (Tanrisever et al., 2012). There is a need for more qualitative and empirical research on the subject as well as a service provider viewpoint (Wuttke et al., 2013a). Several mathematical formulations call for further development (for example Ying, 2012). Looking at these suggestions for further investigation it can be stated that this study can at least partly address the need for further research in the field. More specifically a qualitative approach to a particular solution is taken here.

2.6 SUMMARY OF THE LITERATURE REVIEW

To summarise the above discussion the interplay between finance and operations is increasingly important. To address this need for better coordination a field named Financial Supply Chain Management is gaining increasing attention in the academic world. Managing financial flows translates to making use of various financial instruments, such as reverse factoring and Supply Chain Finance. The current literature mostly concentrates on supply chain finance as the broad concept that considers the different financing options as a whole. There's a limited amount of research on reverse factoring, and Supply Chain Finance specifically, with the focus being on the more quantifiable aspects of the solutions.

Some of the relevant findings from the previous literature include the conclusion that there is theoretical value to be gained from reverse factoring (Tanrisever et al., 2015, 2012) and that the longer the original payments imply bigger benefits (Tanrisever et al., 2015, 2012; van der Vliet et al., 2015). The feasibility of payment term extensions, one of the main motivators of reverse factoring and SCF, has been questioned (Tanrisever et al., 2015, 2012; van der Vliet et al., 2015). Exceptional economic conditions should make reverse factoring type solutions more attractive due to widening credit spreads (Tanrisever et al., 2015, 2012) but at the same time decreasing volumes of receivables makes it less attractive (Dello Iacono et al., 2015).

Innovation adoption in organisations (Rogers, 2003) offers a valid framework for studying the research question that was set during the introduction. Notably the work of Wuttke et al. (2013a) offers an important starting point to this study. Especially *redefining* and *restructuring* could be important concepts for me too.

Following the notion about the different meanings of the terminology the reviewed literature is summarised based on the illustration in **Figure 2**. **Figure 4** divides the studies according to whether they adopt the wider or narrower definition of the term, or reverse factoring specifically.

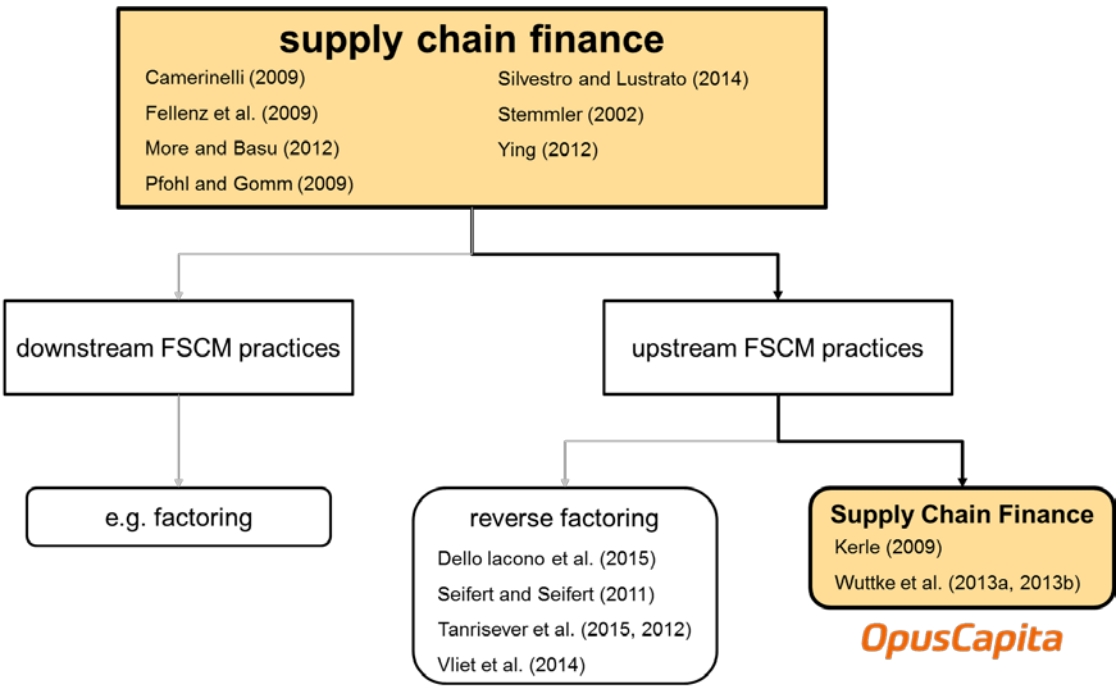

Figure 4 Summary of the literature review based on the terminology adopted by the authors

In **Table 1** I'll summarise, in an alphabetical order, the preliminary concepts that were discovered in the existing literature along with the relevant references. Whenever similar concepts were found the naming was adapted to reflect the message of those concepts. Please note that not every single concept is listed for example from (Wuttke et al., 2013a), only the ones deemed relevant.

Table 1 The preliminary concepts picked from the previous literature

Concept (and dimensions)	References
competition	Dello Iacono et al. (2015)
credit spread	Tanrisever et al. (2015, 2012), van der Vliet et al. (2015)
degree of familiarity (unheard of - common practice)	Wuttke et al. (2013b)
extension of payment terms	notably Tanrisever et al. (2015, 2012), van der Vliet et al. (2015)
external effects	Pfohl and Gomm (2009), Wuttke et al. (2013a)
information sharing	Randall and Farris II (2009), Stemmler (2002)
interdepartmental interaction and collaboration	Wuttke et al. (2013a, 2013b)
interest rates	Tanrisever et al. (2015, 2012), Dello Iacono et al. (2015)
lack of financial competence in operations	Wuttke et al. (2013b), Alvarenga (2014)
opportunity costs of holding receivables	van der Vliet et al. (2015)
organizational culture	Wuttke et al. (2013a)
redefining	Wuttke et al. (2013a)
restructuring	Wuttke et al. (2013a)
SCF leverage	Wuttke et al. (2013a)
scope of suppliers	Wuttke et al. (2013a)
supplier dependence	Wuttke et al. (2013b)
supplier relationship	Pfohl and Gomm (2009), Wuttke et al. (2013a, 2013b), Morgan and Monczka (1996)
top management support/commitment	Tummala et al. (2006), Wuttke et al. (2013a)
uncertainty avoidance	Wuttke et al. (2013a)
volume of receivables/spend	Dello Iacono et al. (2015)
word-of-mouth	Dello Iacono et al. (2015)
working capital goals	Dello Iacono et al. (2015)
working capital policy of suppliers	Tanrisever et al. (2015, 2012)
working capital position (weak - strong)	Wuttke et al. (2013b)

3 METHODOLOGY

The study at hand is an exploratory study into the field of Supply Chain Finance in Finland. Due to the complex and novel nature of the topic case study is an appropriate research design (Eisenhardt, 1989; Locke, 2001; Wuttke et al., 2013a; Yin, 2009). Buyer company is the main level of analysis as it is the buyer who initiates a SCF program. Semi-structured interviews in six case companies make up the main data in the research. The data collected from buyers is complemented with several bank interviews and an interview with a legal professional. The material was analysed using a grounded theory methodology.

3.1 GROUNDED THEORY

Grounded theory is well suited for an exploratory organisational study. It provides a proven methodology that captures complexity, links to practice and supports theorising of new substantive areas (Locke, 2001). Innovation adoption management, especially in the context of Supply Chain Finance, could be considered such a new area.

3.1.1 What is grounded theory?

The methodology was first presented by Glaser and Strauss in their publication *The Discovery of Grounded Theory* (Glaser and Strauss, 1967) and has since sprouted many revisions as well as different schools of thought (Locke, 2001). The methodology in this study was drawn from one of the revised editions of the book by Corbin and Strauss (2008). Exemplary cases and studies (Strauss and Corbin, 1997) were used in addition of the basic grounding literature to give motivation and guidelines into the research process. As opposed to the hypothetico-deductive research process that starts from the theory and then moves on to the empirical part, a grounded theory approach does the opposite, starting from the empirical data and formulating theory based on the findings (Locke, 2001).

The process of grounded theory is iterative and overlapping. During the research data collection and analysis take turns to feed each other in sort of a loop. In principle the analysis could begin right after the first material is collected. On the one hand the data is the basis for the analysis and on the other hand the analysis and the thinking process feed new ideas into data collection in the form of identifying relevant and interesting concepts. This is called theoretical sampling (Corbin and Strauss, 2008).

The amount of material needed to construct a grounded theory usually is not clear in the beginning of the research process. Methodologically speaking adding cases can be stopped once theoretical

saturation is achieved (Corbin and Strauss, 2008). Theoretical saturation means that the categories in the theory are well defined in their properties and dimensions and there are no significant insights emerging from adding new cases. It is essential that the categories that are defined fit the data. The aim of this study is to help shed light on the adaptation process of Supply Chain Finance specifically in the Finnish market. As such the goal is to formulate a substantive, or a case-specific, theory that lacks generalisability as expressed by Corbin and Strauss (2008).

3.1.2 Why grounded theory

Grounded method lends itself well to a case where the amount of data is large and the nature of it is semi-structured. The methodology provides a process for understanding the context of actions and interactions and the different conditions that apply with great emphasis on presentation and treatment of the collected data. The method captures the complexity of situations and has been applied widely with topics ranging from healthcare to social studies and researching the process of recruiting (Strauss and Corbin, 1997). In the context of organisations, for instance, grounded theory has been used to study the complex business-to-business selling process (Åge, 2011), complexities of supply chains (Manuj and Sahin, 2011) as well as organisational settings in general (Locke, 2001). The power of the methodology is in discovering what is not being said about the underlying structures and interrelations (Hildenbrand, 2007). In that sense the goal is to get beyond simply describing what the interviewees are saying.

Grounded theory is especially useful for outlining processes (Locke, 2001). It has been used extensively to create theories that comprise of stages (see Locke, 2001; pages 109-110) and is thus very appropriate for this study as the main framework comes from the innovation adoption process by Rogers (2003) and Wuttke et al (2013a). Locke (2001) describes grounded theory as being useful for identifying triggers that facilitate the movement from one stage to the next one. This idea can be applied to companies moving from the earliest stages of innovation adoption towards the decision to implement Supply Chain Finance.

3.1.3 The Conditional/Consequential Matrix

One of the main methodological tools used in this study is the Conditional/Consequential Matrix by Corbin and Strauss (2008, p. 94). As stated by Hildenbrand (2007) the framework is a noteworthy tool to assist researchers in outlining the complex interactions and underlining structures that lie within the research areas in question. **Figure 5** provides an illustration of the matrix, as visualised by Corbin and Strauss (2008).

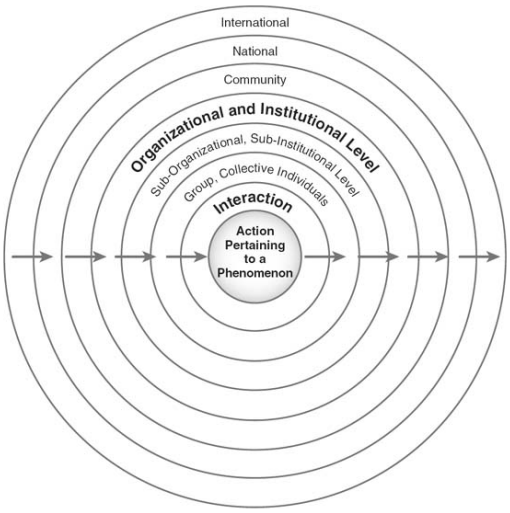

Figure 5 The Conditional/Consequential Matrix by Corbin and Strauss (2008, p. 94)

In the context of this study I want to find out how conditions on different levels affect companies adopting SCF. Companies don't operate in a vacuum but are affected by conditions for example on the larger economic level. The matrix provides a framework on how to arrange these various contextual levels. Various contexts and conditions in the Agenda-setting stage set the adoption process moving.

The matrix framework is very useful considering this study since I want to find the conditions and interrelations that affect a certain action i.e. choosing to adopt a Supply Chain Finance solution. I'll try and delineate the thinking behind companies when they set their agendas. I'll also try to find antecedents to the usage of SCF. Despite there being many levels to the matrix Corbin and Strauss (2008) don't expect a single research to be comprehensive. "We do not believe that every possible condition must be brought into the research. What is important is that research findings don't oversimplify phenomena, but rather capture some of the complexity of life." (Corbin and Strauss, 2008)

The matrix helps researchers become sensitive to the interplay between conditions surrounding a setting (*structure*) and the events that happen there (*action*). In the philosophy of grounded theory structure and interaction go hand in hand, the one shaping the other. Structure could for example be the payment culture in Finland. Action then is the ongoing process of negotiating and renegotiating of payment terms between companies. This action takes place within the frame and constraints of the prevalent payment culture but at the same time shapes that practice and what is considered business as usual. The reshaping can happen in the form of, for example, a Chief Procurement Officer who has been tasked with extending the payment terms and thus ameliorating the working capital position of the buyer company.

3.1.4 Grounded theory applied to the research of FSCM

The applicability of the grounded theory methodology is demonstrated with recent studies using the same approach in the field of Financial Supply Chain Management. In this study I refer most notably to the work by Wuttke et al. (2013a, 2013b).

Wuttke et al. (2013a) set out to answer the question how buyers adopt Supply Chain Finance and why some are more effective than others using six buyer companies as their case sample. They expand on the Rogers (2003) framework for organisational innovation focusing on the implementation. Their other study (Wuttke et al., 2013b) examines Financial Supply Chain Management practices qualitatively with case studies and company interviews. The eight case studies are analysed using the grounded theory methodology to understand the complex interdependencies in the adoption process. The authors use transaction cost economics as a theoretical foundation.

The methodology in these two studies is very similar to what I chose to use in this study. They too studied large corporations. The difference is that they interviewed both buyer companies and suppliers, whereas I added banks to the sample. Also most of the companies I interviewed aren't currently using the solution.

3.2 RESEARCH DESIGN

The study started with a preliminary literature review of the subject. After identifying the first batch of study participants the interviews started. During the course of the research the questions that were asked evolved to some extent according to the principles of theoretical sampling. The analysis began after the majority of the interviews had been conducted and the researcher found the time to start coding the raw data. The ideas that emerged during the analysis then again were used in consecutive interviews. Ambivalence in results and even holes in the emerging model were patched with the help of further sampling as the analysis advanced.

There were two main phases in the analysis. The first ten interviews were conducted with fairly little analysis in between. The last interviews were then used to elaborate on the emerging concepts. The one interview with a legal professional, for example, resulted from the need to understand the legal structure and issues related to the solution. The ideas and questions from the analysis were also brought to next data collection instances.

The analysis guided the questions but not so much the participants that were chosen. It was clear from the beginning that I wanted to include companies that had nothing to do with Supply Chain Finance currently in order to widen the sample and enrich the material. I succeeded with case

company Diddley. I also wanted companies outside the initial batch of contacts given to me by OpusCapita to avoid a bias towards companies who are interested in the solution to start with, which is how I got in contact with Freed, for example. After a good deal of analysis the preliminary results were presented to the assigning company and the ideas from that session were incorporated into the rest of the analysis.

As mentioned before, in grounded theory building data collection and analysis take turns to give rise to a new substantive theory. Next I'll delineate the two processes as they were carried out during the research process.

3.3 DATA COLLECTION

The approach to collecting data was two-fold. On the one hand buyer companies (both users and non-users) were targeted and on the other hand the viewpoint of banks was considered valuable. The approach is true to the methodology as having different stakeholders and different viewpoints enriches the material. Sources other than interviews were used too, namely company reports.

3.3.1 Sampling

I tried to get a nice cross section of companies and different people in different roles to give insights on the topic of Supply Chain Finance. The companies in the sample come from several industries and are among the largest companies in Finland. Even though the management of working capital can be very different from industry to industry and company to company, generally speaking the logic behind payment terms and optimising working capital remains the same. The ideas about Supply Chain Finance, its applicability, usefulness and challenges that were mentioned in the interviews were fairly similar to each other.

I focused on large buyer companies as large companies are more likely to take on the innovation in the beginning. Small and large firms typically have different kinds of organisational structures so not all issues identified with large corporations apply to SMEs. For example, middle-sized companies don't usually have a centralised treasury function. The focus on buyer companies is justified by noting that communications with suppliers isn't typical before the implementation decision (Wuttke et al., 2013a).

Companies in different stages of the adoption process were targeted because similar to Wuttke et al. (2013a) I sought to include companies that have not yet adopted SCF or are not even considering it. In that sense it could be said that beyond the initial batch of contacts given to me by OpusCapita I extended the sample on the basis of theoretical sampling (Corbin and Strauss, 2008). One case

company was already using a reverse factoring solution, some were considering implementing SCF and some were fairly unfamiliar with it, at least on a practical level.

The Supply Chain Finance solution is a major undertaking in a company and it involves many stakeholders from several functions. The most prevalent are the finance function, who typically concerns itself with working capital as a whole (at least in many companies), and also procurement who is the natural implementer and communicator of the solution to the supplier base as they own the supplier relationship management as a topic. For this reason the research was focused on these roles to get a first-hand experience in the practices and challenges of the field and how they relate to Supply Chain Finance and its perceived benefits and obstacles.

Financial institutions of course play a role in the system. As opposed to previous studies addressing Supply Chain Finance (Wuttke et al., 2013a) I have a strong representation of the banking side as well. Interviewing bank representatives gives this study a sense of novelty as well as broadens the sample in a favourable way, enriching the material. Banks have been offering supply chain finance solutions for some time now so there is a lot of expertise in the field and a good deal of insights to be gained. I interviewed people who have been in close contact with customer companies or who have otherwise had a good position and vision across different customer projects. SCF has many legal considerations as well, especially when solutions are global. With this in mind a professional in the legal field was also interviewed to get an understanding about that side of the solution.

3.3.2 Interviews

The main source of material in this study was company interviews. Using interviews is a good way to gather data as it is "flexible, accessible and intelligible" (Hannabuss, 1996). Interviews are a good way to get insight, find out motives and elicit informal procedures. In addition the information is likely to be correct (Hannabuss, 1996).

The testimonies from experts working in the relevant fields (procurement, finance) and the offering side of the solution (banking) give the best quality data and understanding of "what is happening" in the field of supply chain finance. Bankers also provided insight to the financial market in general which proved to be valuable. More important than the exact roles of people are the concepts. In grounded theory work the sampling is based on the need to refine concepts. The analysis guides the direction of the samples, as well the course of the interviews.

The type of interviews is important to consider and adjust according to the research setting (Hannabuss, 1996). As grounded theory requires open-ended data, interviews were kept fairly unstructured. The amount of interviews is determined by the new data that can be drawn from

additional material (Corbin and Strauss, 2008). The total number of interviews was fourteen. Adding cases was stopped once additional insights were considered to be marginal (Corbin and Strauss, 2008). Further adding of cases was limited by time constrains as well.

In most of the case companies I got to interview either the procurement manager or the finance manager of the company, or both. The only exception is Berry where there were two finance managers that were interviewed. As this was one joint interview and the roles of the participants were similar in the context of this study this is counted as one data collection incident.

Interviews were conducted both on-site and off-site by the author between June and August 2015. The interviews were carried out face-to-face whenever possible, or via phone. The interviews lasted from around 30 minutes to one and a half hours. Every interview was recorded and later transcribed word-for-word to allow for coding and a proper analysis, resulting in 178 pages of transcribed interviews. Also, notes were taken while conducting the interviews. The quotes that were used in the presentation of the findings were freely translated to English by the author.

The nature of the interviews was semi-structured to give the discussions a direction and a frame but at the same time leaving room for the participants' answers. The questions were kept open-ended and the interviewees were allowed to talk freely. For example, the notion about the payment culture in Finland came from an open-ended question about the participant's perception about the solution and its market in Finland. Methodologically speaking as the researcher delves deeper into the subject and the analysis advances the questions can become more specific to fill in holes in the emerging theory. The questions circulated around the topics of working capital management, supplier management and supply chain finance in the context of the companies. A good deal of time was dedicated for the implementation process as well, whenever applicable, since in the beginning of the study the final focus wasn't clear to the researcher.

3.3.3 Other source material

In order to triangulate the interview data financial reports of the case companies were scanned to triangulate the statements and to find clues about the agenda of the company. For example a mention of a working capital optimisation initiative was interpreted as a clear indication of working capital optimisation being important and prioritised in the firm. Financial reports were used to calculate the cash-to-cash cycles for companies.

Preliminary concepts for analysis were drawn from previous academic research, which is addressed more in the literature review chapter. Some valuable ideas arouse also from discussions with my supervisor, instructor and colleagues.

3.4 ANALYSIS

The data was analysed in two phases. Initially individual concepts and their properties and dimensions were identified from single interviews. To find similarities and differences and to give the analysis more depth the emerging concepts were compared between cases. To facilitate this process various analytical tools such as questioning and comparisons were used (Corbin and Strauss, 2008). Gradually the coded concepts were gathered under broader categories that describe the common phenomenon. Whenever it seemed appropriate the scope of a concept or its naming was changed (perhaps to align with existing literature).

All along the analytical process the researcher was continuously honing the concepts little by little and delineating the analytical story that was emerging. The tools that were used were not only conceptual, as a computer program was used to assist in the coding, management of memos and the analysis in general. The coding was done using a Computer-Assisted Qualitative Data Analysis Software (CAQDAS), Atlas.ti, which proved to be of paramount assistance.

Analysis in grounded theory building is a time consuming and even creative endeavour. The researcher has to be sensitive to the material and the topics at hand. Drawing upon personal experience helps making comparisons and asking relevant questions of the data so in that sense previous experience about the subject matter helps in the analysis. In order to take the research to a deeper level the researcher has to move from simply describing things, events and phenomena to thinking about data in an abstract sense. This is where concepts and eventually categories emerge from (Corbin and Strauss, 2008). Lengthy memos were written along the analysis process and summary memos of relevant categories eventually served as a basis for the findings.

Next the reader is introduced to the case companies in **Table 2** and given a glimpse of the analytical process in more detail.

Table 2 Case companies

CASE COMPANIES	Albert	Berry	Cochran	Diddley	Elvis	Freed
Industry	Forest industry	Construction	Logistics	Foodservice	Telecommunications	Engineering and service
Stage related to SCF, as expressed by a participant	"We're involved in many reverse factoring programs both with our suppliers and with our customers. We also sell our receivables."	"We're looking into it."	"The project has been ongoing for a year now. We have been discussing this with our suppliers."	"They have been trying to come at our door, but there hasn't been a burning need."	"Currently we're trying to pinpoint the benefits for us."	"We have organised a few workshops internally."
Stage of adoption (Rogers, 2003)	Routinizing	Matching	Clarifying	Agenda-setting	Matching	Matching
Working capital position (C2C cycle, days)	44	205	31	N/A	43	101
Working capital position (as expressed by participants)	"We are pretty close to negative working capital in some businesses"	"Due to the nature of our business the share of current assets is significant."	-	-	"Compared to peers we're doing worse." "We're trying to figure out if there's anything we could do about it."	"There's a good amount of cash to be released for us."
Agenda	According to the finance managers they did have a project about ten years ago to improve their net working capital which was confirmed by looking at previous financial reports.	The strategic meaning of managing working capital is clear. "We have a huge number of suppliers and we want to hold on to the good ones."	Working capital optimization has been raised as an important topic. Has been actively improving their supplier management practices over the past year.	Financial reporting talks about "sustainable growth". Fair value chain is a priority for them. They don't report their working capital.	"I see it as an opportunity to gain some benefits, whether it be via payment terms or as a better hold on our supplier base."	"As a topic [working capital] is getting a lot of attention."
STUDY PARTICIPANTS						
Finance Manager	1	2			1	1
Procurement Manager		1	1	1	1	

The six case companies come from various industries and different stages in relation to the adoption process. The case companies are presented in **Table 2** along with the roles of study participants. The working capital position, as an important antecedent to FSCM practices, was deducted both qualitatively and quantitatively. Firstly an estimation of the cash-to-cash (C2C) cycle was calculated based on the financial figures of 2014 whenever available. A lot of the variation in the C2C variable can be explained with industry. Backed with the statements of the participants it can be noted that the working capital position of most of the case companies is somewhat weak and they are actively trying to improve the situation. This development is demonstrated by the fact that almost every company, besides Diddley, is already past the Agenda-setting stage.

To ensure the anonymity of the participants the names of the companies were replaced with pseudonyms taken from the golden era of rock'n'roll, and the titles were generalised into "finance managers" and "procurement managers". Similarly, banks have been renamed Bank A, Bank B and so forth.

3.4.2 Coding and initial concepts

The analysis began with coding of the transcribed interview data, starting with the first interview and naming the codes meaningfully. First conceptualisations included codes such as *complexity*, *cost of money* and *awareness.* For example, the parts in the interviews that talked about the challenges that the interviewees see in the adoption of the solution were labelled *challenges*. Comments about managing working capital by extending payment terms towards suppliers were labelled *extension of payment terms*. Reconciliation in the context of the payment process was coded *matching of invoices*. When company representatives made statements about the way they manage their strategic partners, or whether they have strategic partners to begin with, was coded *supplier categorisation*. Each new interview that was analysed on the one hand raised new possible conceptualisations and on the other hand helped sharpen the existing concepts and add to their properties and dimensions.

From the start *awareness* was an important conceptualisation. The level of awareness of the participants was deducted by asking what their relationship to SCF was. How the awareness builds and moves within the organisation was examined by for example asking "where did you first learn about the solution?" For a long time awareness was one of the main independent concepts but it got eventually merged with a broader category, Familiarity with SCF, along with other codes such as *attitudes*.

In the beginning of the research I was quite preoccupied with the implementation project of SCF. It serves as an example of a study trajectory what was later discarded. After the stages before implementation were found to play a bigger part in the context of this study, implementation as a concept was given a minor role. Similarly, at some point I thought that contracts might be important because they are somewhat complicated. After discussing with the legal expert I realised that they are not among the main obstacles: if companies have the agenda in place and a real will to drive an SCF initiative forward then contracts are not the deal breaker.

As new conceptualisations emerged during the course of the analysis they were constantly compared with existing ones. Concepts that fit together were eventually collected under broader common concepts i.e. categories.

3.4.3 Developing categories

After the initial conceptualising the data the concepts were put under broader categories that link all the concepts in question together. While doing so the researcher has to go back to the material to see if the categories still fit the data (Corbin and Strauss, 2008). Integrative diagrams were used delineate the relationships between categories. Similar to Wuttke's et al. (2013b) approach, as the theory unfolded it was reflected back at the existing literature and the preliminary concepts (Corbin and Strauss, 2008; Eisenhardt, 1989; Yin, 2009). Concept names where adopted from the literature wherever it felt appropriate. A pivotal role in the analysis was discovering the framework by Rogers (2003) and Wuttke et al. (2013a). After that the categories finally started to fall in place.

For example, it became evident early in the research process that banks play a major role in adopting supply chain finance solutions in many ways, hinting that a new category was required. After discovering the Matching category from Wuttke's et al. (2013a) framework it was made clear where the role of banks should be put conceptually. In the Matching phase the competencies of the bank (or any other service provider) are measured against the goals and needs of the buying company. The interplay between buyer companies and banks forms the basis for the Matching stage in the final framework.

At this later stage of the analysis the above-mentioned *extension of payment terms* was put under *working capital optimisation* and *supplier categorisation* under *supplier management*. At first this is where the *number of suppliers* ended up as well, but eventually the concepts size and amount of suppliers were combined under the broad category *scope of suppliers*. Supplier categorisation was seen to be more relevant in supplier management (Agenda-setting) whereas the number of suppliers refers to the scope of the solution that the buyer company has in mind (Matching). Matching invoices was summarised under the procure-to-pay process. Finally the concept procure-

to-pay process was put under *need to restructure*, and working capital optimisation and supplier management were put under Agenda-setting, following the conceptualisations by Wuttke et al. (2013a).

Outlining the process in the analysis was fairly straightforward as the framework of innovation adoption offers clear stages that follow one another. Contextual factors were included in the model wherever the thinking seemed sound enough. Finally, based on the findings, several propositions were formulated as the main analytical contribution of the study (Yin, 2009). Propositions relate categories to each other and reveal their interdependencies (Locke, 2001).

3.4.4 The core category

According to Corbin and Strauss (2008) the analysis reaches its culmination once a core category is identified. A core category is a concept that ties the whole analytic story together. In the context of this study the category had to be able to bring together all the major categories including *Familiarity with SCF*, *Company agenda* and *Banks as service providers*. The broad category that I found to link all my finding together as well as to align them to the existing framework was named **Matching the company agenda with available solutions**. It's a process-oriented category or a trajectory that outlines a certain succession of events (Locke, 2001).

4 FINDINGS

The main categories that emerged as the result of the analysis, the concepts that make up the categories and chosen relevant quotes to describe that concept are presented in **Table 3** below. In the explanation of my findings I'll try to use as illustrative examples as possible picked from the data. Based on the insights of the analysis I will posit propositions along with presenting the findings in the next section.

Table 3 Categories and concepts along with original quotes

Category	Concepts	Original quotes
Agenda-setting	*Economic downturn and financial crisis*	*"After the crisis in 2008, when the bank financing practically stopped and companies had receivables all over, the need to consider cash flows and receivables and financing and supplier financing started to grow fast."*
	Payment culture in Finland	*"In Finland […] the payment behaviour is damn good." "It causes phlegmaticness."*
	Industry	*"My guess would be that construction isn't the easiest industry."*
	Working capital optimisation	*"Working capital has been raised as one of the KPIs in procurement. […] [W]e have been forced to pay closer attention to it [working capital] and the traditional means have been the above-mentioned extension of payment terms. Now we'll have to think about other ways to maximise that side."*
	Supplier management	*"Lowering the total cost of the supply chain and thus improving competitiveness. Better flexibility in relation to changing markets […] These are the kind of themes that are really important." "We at Cochran have focused a lot on this supplier management for the past year or year and a half and we have systematically built the model."*
Familiarity with SCF	*Banks' role in familiarising companies*	*"We have been throwing these ideas around for a while now. Of course we would like to think that we are the ones bringing the ideas on the table." "In Finland we have a particular group of companies with which we collaborate and typically we offer this solution only to our existing customers."*
	Lack of familiarity	*"The first one is that we haven't recognised this opportunity before, that is to say that there hasn't been awareness about the model or its benefits in a large enough scale for us to consider implementing it."*
	Familiarity asymmetry between finance and procurement	*"[Treasury] is typically the first point of contact but it might be due to my background too. When discussing other business I deal with treasury." "Frankly I've heard surprisingly little [about the solution]… very little."*
	Interdepartmental interaction	*"We have procurement and finance under the same organisation. There is a dialogue via a common superior".*
Matching	*Scope of suppliers*	*"Our aspiration is for this model to be so straightforward, scalable and easily deployed that we could offer this to our entire supplier base regardless of industry or size."*
	Geographical spread	*"Let's say that no financial institution, or very few, can handle this globally […]. This brings us to the local aspect again. There are operators who are strong in certain areas."*
	Readiness of the buyer	*"Of course a stable environment is pretty crucial and the shoulders [creditworthiness] of the buyer, that's a big thing." "Systems might be all spread out and they have to be consolidated. Only after that can you start doing reverse factoring in a larger scale and in a controlled manner."*
	Need to redefine	*"[T]he Supply Chain Finance solutions of some banks support around ten to twenty suppliers. Our need for Finland alone would be thousands. So there's a discrepancy." "[A] small company in a supply chain finance facility, that doesn't exist currently. There are these middle-sized companies that are part of some program. Or large companies that are in the supply chain finance facility of an even larger company."*

	Need to restructure	*"In some companies [invoice reconciliation] seems to be the single biggest challenge, a concrete issue that has to be addressed." "If we adopt this system, we'll have to restructure our whole supply chain. […] This is a great project if we can pull it through."*
	Scope of the solution	*"[As we've] thought about how [the solution] could support our goals related to working capital optimisation and particularly managing supplier relations, I believe that there are good elements that we can make use of in that environment."*

4.1 AGENDA-SETTING

Agenda-setting is the first stage in the process of adopting Supply Chain Finance. What was found during the research is that the adoption of Supply Chain Finance is closely related to the agenda that the company has, the agenda being an antecedent to the type of solution the company chooses to adopt. The one case company who is actively using reverse factoring (and is thus in the Routinizing stage in the Rogers (2003) framework), Albert, is very advanced in its FSCM practices and uses supply chain finance solutions both upstream and downstream. They initiated a working capital optimisation program around a decade ago which eventually lead them to use reverse factoring. As the finance manager put it:

"[W]e ourselves had a need to free up working capital for other uses. We started out with selling receivables and somewhere along the way we learned about reverse factoring."

The quote shows that having a relevant topic such as working capital optimisation on the agenda isn't enough for using Supply Chain Finance. The other side of the equation is "learning about the solution" and getting to know the possibilities that lie within. Thus in addition to *Agenda-setting*, that entails the topics that are considered important or strategic in the company, there has to be a big enough degree of *Familiarity with SCF* in order for the company to advance in the adoption process.

As has been noted before Supply Chain Finance, notably on the Finnish market, isn't widely known yet. This makes the category very relevant. Since there are, nonetheless, already companies using the solution there has to be some level of familiarity in those organisations even though the solution isn't widely acknowledged as a viable opportunity. This would indicate that the category Familiarity with SCF should be broken down to various levels. In this case the relevant levels are the *individual level* i.e. particular people in companies knowing about the solution, *company level* which means that a larger group in decision-making positions know about the solution, and then the *market level* which includes the wider visibility of the solution in business and in media, for example.

As noted by Rogers (2003), Agenda-setting entails companies recognising challenges or performance gaps that they want to address. Agenda-setting doesn't happen in isolation but is

affected by conditional factors on higher contextual levels. For example, recent economic development has raised the importance of optimising working capital in companies. Industry plays a role in how the relationship with suppliers is typically handled, as depending on the nature of the business the company might be more or less dependent on the suppliers (Wuttke et al., 2013b). The marketplace where the company operates is important as the actions of competitors often act as impulses to what the company considers important which leads to imitating the behaviour (Wuttke et al., 2013a). The market context is especially relevant when considering the payment culture in Finland.

These different building blocks of Agenda-setting are outlined in **Figure 6** below. There are two ways in which Familiarity with SCF and Agenda-setting interact. In the case where the company has a clear agenda in place they start to actively look for solutions to address those needs they have (*Scouting*). On the other hand, getting to know about Supply Chain Finance might launch a reaction in the company and make them realise that they could have some opportunities in improving their working capital – or integrating their suppliers more closely for that matter. This could be called *Fitting* an existing solution to the not-yet-recognised needs of the company. Rogers (2003) calls this behaviour "opportunistic" and notes that they are typically so many challenges with companies that a solution is bound to find an issue it could address.

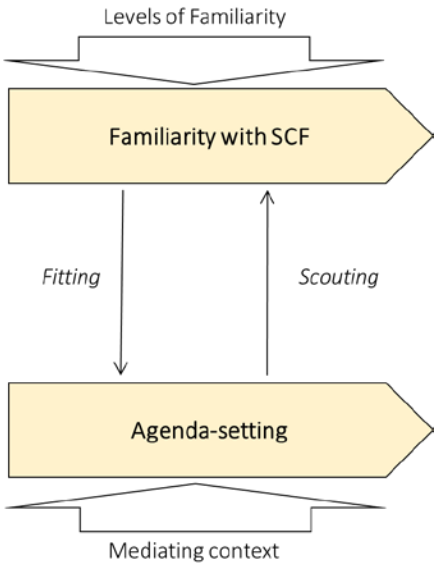

Figure 6 Familiarity with SCF is equally important as Agenda-setting in the first stage of the adoption process.

There are various agendas that Supply Chain Finance can address. The two most notable are *working capital optimisation* and *supplier management*. Lately working capital optimisation has been on the agenda of practically every major company. As the representative of Bank D put it:

"You can't find a CFO of a major corporation who doesn't concern themselves with working capital management or working capital optimisation."

As most of the case companies are already past the first step in the initiation process I have the perfect opportunity to study the way in which they formulated their agendas. Next I'll drill down to more detail on both sides of the first stage.

4.2 FAMILIARITY WITH SCF

The first extension and contribution of this study to the adoption process framework is a broad category called Familiarity with SCF. As stated before the agenda favouring the adoption of Supply Chain Finance isn't enough. How could a company take on a solution that they've never heard of? It's not surprising if a company is still unaware of Supply Chain Finance. As has become apparent the solution is fairly new, even more so to the Finnish market. Most of the interview participants had only recently, during the past couple of years, heard about the solution or started the discussions about a potential arrangement (thus moving to the Matching stage). As with previous literature, there was some disagreement over the terminology and I even had to explain the term reverse factoring on a couple of occasions, which further demonstrates the novelty of the field.

The Familiarity with SCF runs on several conditional levels. The levels are the individual, the company and the market at large. The market here is more about the domestic Finnish market in this case, but it could be generalised to the international market as well. The key is that there has to be a sufficient level of familiarity on the company level. It isn't enough if only one person in the company knows about the solution, but then again there could be companies that don't recognise the solution as potential even though most of the companies on the market know about it. The critical level of familiarity on the company level is hard to pinpoint and probably depends on many factors. Since these solutions are typically initiated at the top management level it could be fair to assume that that's the minimum level that is required for an SCF initiative to take place.

These layers of recognition are inter-related and connected to each other. The market level relates to the company level as how visible the solutions are on the market. Companies contribute to this visibility by openly telling about their solutions in the media or perhaps in professional conferences and trade publications. Individual level knowledge about SCF is diffused company-wide through *interdepartmental interaction*. This refers notably to the dialogue between finance and procurement functions as they are the two most relevant ones, considering the nature of the solution.

All the levels are also affected by their relation to the service provider side which traditionally consists of banks. The banks contribute to the awareness by marketing their solution publicly or telling about it in media or expos, for example. The levels of familiarity and how they relate to each other are depicted in **Figure 7**.

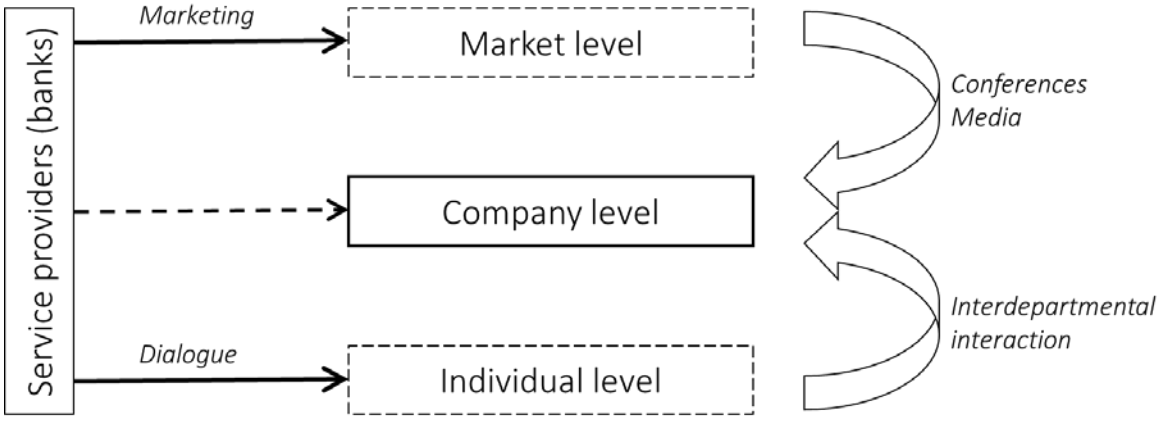

Figure 7 The levels of Familiarity with SCF and how they interact with each other

Familiarity with SCF also reflects the attitudes and preconceptions about the solution. For example, the procurement manager at Diddley expressed his view on the topic by saying that:

> *"Barrier number one is that there should be a need for such a solution. And the need comes from either the buyer or the supplier having financial difficulties."*

So the only way such an arrangement is feasible is that one of the parties is in financial trouble. The statement isn't completely unjustified considering the discussion of small companies being more prone to liquidity problems. But it misses some of the other potential benefits of such arrangement. Both Diddley and Elvis were also very concerned about the fact that suppliers would increase their prices following the payment term extension. The procurement manager of Diddley called it a "trade-off between a longer payment term and lower prices". Similarly, the procurement manager of Elvis stated:

> *"The fact is that there's always a cost related to Supply Chain Finance… the supplier has to put it somewhere."*

Previous experience with similar solutions can have an effect on the attitude towards SCF. It can lead to scepticism. Elvis hesitates because they are not sure whether they would find suppliers who are interested, as they have previously tried to persuade their suppliers to accept cash discounts but with little success. Similarly Berry has had negative experiences with factoring before which shows as a requirement for the solution to show some strong merits before they are willing to

advance to implementation. Negative experiences affect the consequent adoptions of new technologies adversely (Fellenz et al., 2009).

4.2.1 Banks' role in familiarising companies

Since it's the banks who have been offering the solution so far it's quite natural that they have a major role in creating awareness and sharing knowledge about supply chain finance. One of the participants, a procurement manager of Cochran, speculated that there seems to be a lack of marketing efforts from the banks' side which would indicate that they don't have a strong enough impact to the Familiarity of SCF on the market level.

On the individual level there is an on-going dialogue with the banks as part of their business-as-usual and customer relationship. The extent of this dialogue is probably company-specific. Sometimes the banks are very active in offering these facilities, as has been the case with Freed which is now in the Matching stage: "Every single of our banks, and others too, have been in contact very often and try to push their solution." The banking relationship was described by Bank A in the following way:

> *"We have been throwing these ideas around for a while now. Of course we would like to think that we are the ones bringing the ideas on the table."*

Banks of course have many other products to offer to companies as well. Depending on the banks the company is using it might or might not have a direct access to a supply chain finance facility. The representative of Bank B stated that:

> *"In Finland we have a particular group of companies with which we collaborate and typically we offer this solution only to our existing customers."*

The company and individual levels might be hard to distinguish and the borders might be blurry when it comes to the dialogue with the banks. The reason the dialogue was related to the individual level is that it became clear from the interviews that the dialogue between the bank and the company happens typically with the CFO or the finance function in general. This is of course natural due to the nature of the relationship: because of their role as a financing partner the banks interact with the finance function. The representative of Bank C reflected on their role:

> *"[Treasury] is typically the first point of contact but it might be due to my background too. When discussing other business I deal with treasury."*

Procurement managers aren't typically included in the discussions. When asked about it from Bank C they stated that it's "very rare". This is one factor in why there is an evident Familiarity asymmetry between finance and procurement.

4.2.2 Familiarity asymmetry between finance and procurement

The procurement managers of Berry and Cochran expressed their surprise about how little the topic of SCF is discussed in their field. The finance managers, on the other hand, generally stated that the solution is nothing new but that there seems to be a "new wave" of more sophisticated type of solutions. Typical comments from finance managers were along the lines of, as stated by the finance manager of Elvis:

> *"[The topic] has been visible in trade publications for some time already."*

The conclusion could be drawn that the concept of supply chain finance isn't completely new. On the contrary, the procurement manager of Berry said that:

> *"Frankly I've heard surprisingly little [about the solution]… very little."*

This was the message of the procurement manager of Cochran as well.

In the case of a couple of the case companies it is clear that the initiative came from the CFO who forwarded the idea about the innovation to procurement. For instance with Berry and Cochran the idea to look into Supply Chain Finance came to procurement from their CFO. This sort of development of events, as well as the statements above, further demonstrates the asymmetry that exists between finance and procurement functions in their knowledge of SCF. However, this difference might not be that significant. Consider the finance manager of Freed who heard about the solution "*two to three years ago*" and the procurement manager of Berry to whom "*the topic was quite new one year ago*". The relevancy of this asymmetry notion in addressing the research questions in this study is thus a bit of a question mark.

It seems that banks can't directly affect the company level of Familiarity with SCF unless they include the procurement function in the discussions as well. As there are many other agendas to discuss between the banks and the finance function it could be that the role of procurement in bank relations would be marginal which is why it's not considered worthwhile to include them. What follows is a discussion about how the two levels, individual and market-wide, affect the Familiarity with SCF on the company level.

4.2.3 Familiarity on the individual level

In the model presented above the individual level of Familiarity affects the company level through *interdepartmental interaction*. Wuttke et al. (2013b) separate between interaction and collaboration stating that collaboration is a closer form of interaction with the two functions being more aligned in terms of their day-to-day work with common goals, cross-functional teams etc. Since Wuttke et al. (2013b) focus on the implementation stage the distinction is undoubtedly justifiable. The focus of this study is, however, on the initiation and thus it suffices to consider the link between different departments on purely information-sharing basis in the first step of adoption. Because this corresponds to Wuttke's et al. (2013b) definition of interdepartmental interaction I will adopt that term and conclude that the distinction between interaction and collaboration isn't required in the context of Agenda-setting. It should be noted, however, that the planning and the pre-studies in the Matching stage are done in cross-functional teams (Wuttke et al., 2013a).

Interdepartmental interaction relates to how information of SCF is communicated in a company and whether ideas are openly shared with colleagues from other functions. When the company and the individual level interact enough, the level of familiarity in the company rises to a high enough level for the initiative to take place. As mentioned earlier, banks typically only interact with the finance function of the company. In order for the procurement function to become involved there needs to be some level of information sharing between the two functions. If the two functions exist in separate silos and barely talk to each other, banks could in principle act as mediators to help coordinate between the two functions (Silvestro and Lustrato, 2014). With Elvis there is interdepartmental interaction, as expressed by their procurement manager:

> *"We have procurement and finance under the same organisation. There is a dialogue via a common superior".*

Lack of financial competencies in procurement was mentioned on a few occasions as a challenge with adopting Supply Chain Finance. Procurement managers undoubtedly need guidance from finance managers to understand the fundamental financial implications of Supply Chain Finance, but as Wuttke et al. (2013a) found the same goes the other way as well: financial managers can be very much alienated from the operational aspects of the business and don't have any touchpoints with suppliers which of course is the bread and butter of the people working with Supply Chain Management.

4.2.4 Familiarity on the market level

As seen in **Figure 7**, the market level interacts with the company level through media and various trade events, such as expos, as well as trade publications. Companies that already use the solution can tell about their experiences on various forums, which in turn affects the awareness and interest of other companies. Seifert and Seifert (2011) state that reverse factoring has received much attention in treasury conferences, which was confirmed by many of the finance managers that took part in the study. Again, the story seems to be different for the people in procurement. The procurement manager at Cochran stated that they haven't seen the solution covered that much in conferences. The visibility of the solution, at least for a procurement manager, is demonstrated by the following quote from a procurement manager of Berry:

> *"This kind [of solution] has been a topic on the [procurement] field but there hasn't been a service provider. There has been a need and a will to learn more but the solutions have been mostly related to selling receivables, which is a completely different story."*

From the viewpoint of the procurement manager of Elvis "the awareness isn't that high, there aren't that many operators".

4.3 COMPANY AGENDA

The general atmosphere is that companies have been awoken to take a much more robust stance on their cash flows and at the same time take a look at their working capital. Some might have taken working capital management as part of the company culture and way of doing business. Companies have realised that there is quite a lot of cash tied in their current assets and that that could be the closest place to get additional financing as banks are more cautious about lending. Also, increasing shareholder value is always relevant and thus inefficiencies and lazy money aren't acceptable. When at the same time supply chains are increasingly important, people are not just looking at their own business as an isolated unit but trying to optimise the supply chain as a whole. Both working capital optimisation and supplier management are integral parts of this development. Next I'll discuss in more detail the two main "streams" of agendas that act as major motivators for adopting Supply Chain Finance.

4.3.1 Working capital optimisation

The motivations behind optimising working capital vary but they generally circulate around some common themes. Some of the main benefits listed by the study participants include less cash tied up in operations, better financial ratios and improved company valuation. *Working capital position*

is raised by Wuttke et al. (2013b) as the main antecedent for a company to start focusing on Financial Supply Chain Management. A weak working capital position means either issues with liquidity (probably more relevant to an SME) or too much cash tied up resulting in inefficiencies (probably more relevant for a large corporation). Almost all of the companies that were interviewed have a weak working capital position and they aim to improve their net working capital by for example extending payment terms. Optimising working capital is the main driver for Supply Chain Finance, according to study participants.

In the context of upstream supply chains and this study optimising working capital relates the closest to extending payment terms towards suppliers. As working capital optimisation becomes a bigger issue in a company, extending payment terms becomes more and more relevant. As noted by the procurement managers who took part in the study traditional means to extend by renegotiating are limited, partly due to the prevalent payment culture. Also the SMEs are typically so cash-strained that one-sidedly extending payment terms simply isn't an option. In the words of the procurement manager of Cochran:

> *"Working capital has been raised as one of the KPIs in procurement. […] [W]e have been forced to pay closer attention to it [working capital] and the traditional means have been the above-mentioned extension of payment terms. Now we'll have to think about other ways to maximise that side."*

The quote above demonstrates the process and effect that raising the importance of working capital management can have in a company. The process could be summarised in a few key steps:

1) Working capital (optimisation) becomes important on the company agenda
2) In order to improve the working capital position the company starts to renegotiate payment terms
3) Not only is renegotiating slow it also most likely doesn't yield remarkable results
4) Search for a way to make a significant leap in extending payment terms

Supply Chain Finance lends itself to payment term extensions because it helps the SMEs on the supply side manage their financing better and at a more favourable rate.

The increasing importance of working capital as a topic can result in it being managed on a more central level and in taking more advanced measures in managing it. Working capital optimisation projects are facilitated by centralised ownership as then the goals of the company are better aligned and the progress is better monitored. Centralisation could mean also that the top management is more engaged in the common goals. Working capital management is cross-functional meaning that

there are several functions that explicitly or implicitly affect net working capital and are responsible for it. Lack of a holistic view on working capital could result in individual functions working against a better working capital position. Wuttke et al. (2013a) observed common goals aligned with respect to working capital to be essential in implementing Supply Chain Finance.

4.3.2 Supplier management

According to Bank D working capital optimisation might not be the only driver for companies to adopt Supply Chain Finance. In fact, there are a number of other possibilities to improve the working capital position that are much more straightforward. Instead, as a facility to improve the working capital position of the suppliers SCF is becoming an important tool to improve supplier relations and integrate them better with the buyer. In the words of the Bank D representative:

> *"Lowering the total cost of the supply chain and thus improving competitiveness. Better flexibility in relation to changing markets […] These are the kind of themes that are really important."*

This statement is corroborated by Seifert and Seifert (2011) who note, based on their global survey, that improving supplier relations is among the main benefits of reverse factoring type arrangements.

At the same time the role of supporting functions such as procurement has become more important and strategic, as stated by some of the study participants. Procurement for example isn't only seen as a tool for cost savings but also a driver for several strategic goals, such as working capital improvement and closer collaboration with suppliers. Improving supplier relations can be a strategic edge for the company in that they can enjoy a more stable supply chain, and also use the closer collaboration to innovate together with key suppliers.

Cochran is the most notable example in how supplier management acts as a catalyst for Supply Chain Finance. As their procurement manager put it:

> *"We at Cochran have focused a lot on this supplier management for the past year or year and a half and we have systematically built the model."*

Besides Albert, the one long-time user of reverse factoring, Cochran is the most advanced in their adoption among the case companies, them being in the Clarifying stage. Not only is working capital optimisation on high importance so is managing their supplier base. The solution they are implementing is specifically a Supply Chain Finance facility, as opposed to reverse factoring.

If working capital management optimisation efforts start from managing payment terms and inventory, on the supplier management side the first line of action typically is to decrease the amount of suppliers. That way a company tries to make supplier management more efficient and advance the integration. Wuttke et al. (2013b) dimensionalise the types of buyer-supplier relationships as either “strategic” or “transactional”. However, their study found that the type of the relationship only plays a minor role in whether a company engages in Financial Supply Chain Management.

A relevant concept in Supply Chain Finance related to supplier management is the *procure-to-pay process*. The properties include for example the level of automation, matching of invoices and payment process, each of which is an important consideration while adopting SCF. Improving the procure-to-pay process could be another motivator for taking on Supply Chain Finance, as became evident with the interviews with Berry who currently struggle with a suboptimal payment process and excess claims that results from it, which in turn is an indication of lack of coordination in the supply chain (Fellenz et al., 2009).

4.3.3 Cash management, risk management and corporate responsibility

There are also other agendas that can be relevant but aren't that major according to the research. These are cash management, risk management and corporate responsibility. Especially both cash and risk are more easily managed with an SCF facility. Cash management is considered secondary since liquidity typically isn’t an issue for large corporations. SCF improves cash management by making cash flows more visible and easier to forecast. A major benefit can come from the improved procure-to-pay process.

Supply Chain Finance helps lower the risks in the supply chain by making the collaboration between the parties closer. As suppliers can finance their operations at a more favourable rate the risk of supply chain disruptions decreases (e.g. Wuttke et al., 2013b). By helping to improve the health of the supply chain the topic can also be considered a corporate responsibility issue. A couple of study participants expressed their concern for their supplier base which consists mostly of SMEs. By sharing their credit rate with their suppliers, instead of just extending payment terms one-sidedly, buyers can actually help their suppliers to improve their business.

4.4 The mediating role of context in Agenda-setting

In the following section I’ll delineate the contextual factors on different levels that affect the Agenda-setting process in companies. Agenda-setting is the other key process in the first stage of the adoption framework. **Figure 8** is an adaptation of the Conditional/Consequential Matrix

presented by Corbin and Strauss (2008) where Agenda-setting is the action and the international, market and industry levels conditionally affecting the company and its agenda. In principle the arrow could move outwards from the centre as well indicating the role that individual companies play in shaping the payment culture of a country, for example. That is however outside the scope of this study as the only interested is in how companies set their agendas.

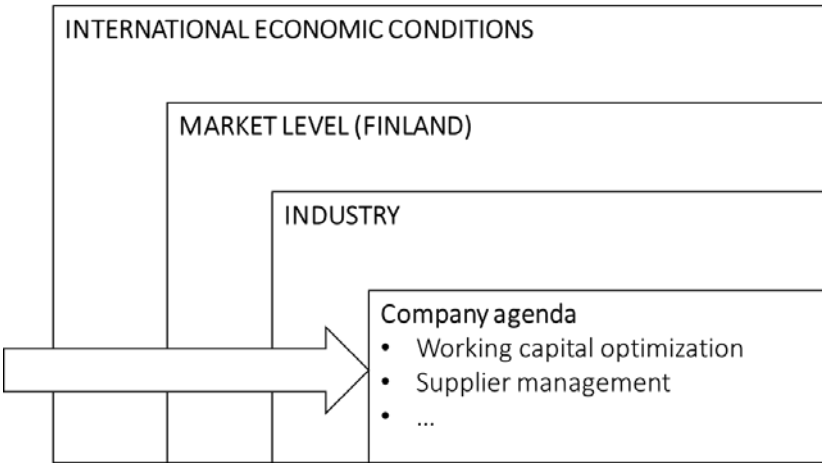

Figure 8 The various levels of context that relate to Agenda-setting on a company level

4.4.1 International context: economic downturn and financial crisis

On the highest international level recent developments include the financial crisis followed by an economic downturn which resulted in low interest rates. This is an increasingly relevant context for Finnish companies as they are more and more global, both in terms of their customers and suppliers. The economic downturn is seen as low demand which puts the companies' emphasis on efficiency and capital usage. Many sources state that the difficult financial times have caused the supply chain finance solutions to gain popularity (see for example Hofmann and Belin, 2011). As a differing view Dello Iacono et al. (2015) propose that an economic downturn would inhibit the adoption of reverse factoring due to the declining amount of receivables that the supplier is able to discount. The representative of Bank C put it this way:

> *"After the crisis in 2008, when the bank financing practically stopped and companies had receivables all over, the need to consider cash flows and receivables and financing and supplier financing started to grow fast."*

The financial crisis caused banks to be more cautious about their financing, which might affect companies looking for external lenders. Smaller companies may find it hard to borrow, while for large companies, the buyers in this study, typically enjoy the high credit rating and access to financing. Low interest rates make the financing markets very liquid which deteriorates the banks'

competitive edge while marketing their products. More competition means lower margins and according to Dello Iacono et al. (2015) diminishing interest in reverse factoring from the banks' side.

Low interest rates and low margins together make financing very attractive and cheap for those who have the credit rating to merit abundant financing. This typically means larger corporations. According to some interviewees low interest rates per se don't make SCF as a solution more attractive, but the margin between the cost of money for large companies and small companies. The credit spread has been found to be beneficial in previous literature too (Tanrisever et al., 2015, 2012). On the other hand some mentioned low margins to be helpful considering adopting SCF. When thinking about cost of money it has to be remembered that low interest rates affect all instruments equally. Then again, if company is not using any financing in their upstream supply chain, for example, taking on a new instrument can be very attractive with a low cost of financing. The finance manager of Albert explained that they as suppliers have benefited greatly from reverse factoring and the low interest rates.

Large buyers aren't the only ones subject to the contextual factors. The challenges faced by the suppliers affect buyers implicitly. Contextual factors, such as the financial crisis which might result in buyers extending payment terms, and industry-specific idiosyncrasies (e.g. reverse VAT), have increased the pressure for suppliers to start using financing instruments to finance their working capital needs. Typical solutions include factoring and selling receivables. The additional costs resulting from using such instruments should show in the price for the buyer which is of course unfavourable to them. SCF would be a way to ease the situation of the suppliers. On the supplier side, widening credit spreads should make Supply Chain Finance very interesting money-wise, as for them the cost of money is typically higher than for corporations. The interest of the suppliers is very important for buyers as well because the solution is quite useless without sufficient supplier participation (Wuttke et al., 2013a).

After the financial crisis banks became stricter with their loaning and as a result factoring rose in popularity. Factoring is a fairly safe business for banks as there is always the invoice as collateral. Especially SMEs not only got the necessary financing they needed but they also disconnected themselves from their buyers and the risk that they wouldn't pay their dues in time, as pointed out by a representative of Bank C.

Now the acute effects of the crisis "have already been forgotten" according to the Bank A representative, but nevertheless the economic downturn continues with lagging market development and uncertainty about the future. Since growth is hard to find, especially market-

aided, companies are looking for ways to improve their efficiency, do more with the resources and capital they have as well as improve their financial ratios in the process and try to increase the shareholder value.

On the international level as well there are obviously more operators and service providers offering SCF solutions. Those programs by the larger institutions are increasingly global (some of the successful implementations were cited earlier). This means that companies that are more internationally oriented are more likely to run into these solutions. They are thus more likely to be familiar with these facilities and thus their degree of Familiarity with SCF is higher.

4.4.2 Market level: Finland

One of the major themes in terms of this study is the *payment culture*. It is the overall mentality, assumptions and the unspoken rules that govern the code of conduct between companies and it defines what is acceptable in terms of payment behaviour. As with any culture it is very pertinent and hard to change. Two distinct types of payment cultures exist, if a bit of polarisation is allowed.

There is the *early payment culture*, or a culture of diligent payments, which is a culture where early payment is a virtue and perhaps even a matter of honour. Finnish people are known to be honest and diligent and it is demonstrated in the way companies interact with each other too. That culture entails payment terms that are in general short, and conscientiousness in payments which is demonstrated by paying in time and not extending the payment terms in a maverick way. In general companies are not greedy when it comes to negotiating payment terms and they feel responsible of the health of their supply chain. An early payment culture doesn't take kindly to the efforts to extend payment terms. They are seen to undermine the business of especially smaller players.

This is as opposed to the *late payment culture*, prevalent in Southern Europe, for example, that is characterised by the payment terms being a lot longer and them being disrespected more often. This could be one of the drivers why SCF type solutions have become the norm there. These statements of differing payment cultures in Northern and Southern Europe find proof in statistics (Intrum, 2015).

The payment culture is demonstrated both on the international and national level in that it is clearly different in Finland and in other parts of Europe. The payment culture in Finland is about short payment terms which is pretty much a given and companies don't really deviate from that. This is verified by the statistics (Intrum, 2015) according to which Finland is in fact one of the fastest paying countries in Europe with very little bad payments. As noted before supply chain finance solutions are much more common in countries where payment terms are long, for example Spain. Pretty

much every participant confirmed the existence of the Finnish payment culture, either when asked or from their own initiative (the topic first emerged from an open-ended question). Some study participants described Finns as being even “too conscientious” and the early payment culture being unwarranted. Others didn’t want to see the Finnish payment behaviour becoming the same as in Southern Europe.

The mediating role of existing payment terms is noted also by Tanrisever et al. (2015, 2012) as well as van der Vliet et al. (2015) who conclude that the longer the existing payment terms are, the more beneficial a reverse factoring arrangement is and the more likely a supplier is to participate. Since traditionally the payment terms have been very moderate in Finland, and very long in Southern Europe, it’s easy to see the link between payment terms and supply chain finance usage on a European level.

One factor adding to the early payment culture is that labour unions (notably Suomen Yrittäjät, the union for SMEs in Finland) are strong and outspoken about the fair treatment of SMEs when it comes to payment terms. There's also a certain "Lutheran" discipline and moral, according to the procurement manager of Elvis, when it comes to paying early. There's even legislation on the country level limiting the possibility of buyer companies to one-sidedly extend their payment terms. Mutual contracts can still be made were both parties agree on the extended payment term.

The early payment culture is concretely demonstrated by the Finnish Late Payment Law that was changed from the beginning of May 2015. From now on the maximum payment time is 30 days (instead of the earlier 60 days), unless the parties agree otherwise. This reflects the mentality, even though in practice that piece of regulation can be disregarded in many cases because buyers still get to negotiate their payment terms with their suppliers. This kind of legislation of course adds to the zeitgeist of shorter payment terms. The public discussions focus on the tight spot the small entrepreneurs find themselves in because they have to wait for the receivables for a long time and the prevalent sentiment seen in media seems to be pro shorter payment terms.

Partly due to the early payment culture - diligent payments and honest mentality - there hasn't been an acute need for SCF in order to finance one's business. Paying in time makes it easier even for a smaller player to operate. Payment culture also affects the attitudes towards factoring type solutions. Ingrained attitudes in an early payment culture include not seeing SCF and other financial instruments as a real way of managing working capital, perhaps partly because they imply an extension of payment terms.

Due to the international nature of today's business environments the customers and supply chains are more and more abroad and the "European payment culture" is slowly making its way to Finland as well. Remember the discussion about structure and interaction: negotiating payment terms happens in the context of the payment culture but is at the same time reshaping it, especially with every agreement that is made with terms that don't conform to the norm (Hildenbrand, 2007). The trend is upwards when it comes to payments terms and according to some study participants the longer payment terms – 60 days, 90 days – are becoming business-as-usual for larger companies.

The payment culture is an important contextual factor in relation to company agenda. Procurement managers become uneasy when talking about extending payment terms, don't consider it feasible and state that even if they decided to set a longer term in their tenders the suppliers would act according to the tradition and offer a deal with a typical 30-day payment term (Elvis). This is essential since working capital optimisation, especially on the upstream that is our focus, depends on the buyer's ability to renegotiate longer payment terms. Supply Chain Finance could alleviate the resulting weakened financing position of the supplier but still the mentality and the payment culture are strongly dominant. Elvis states that they are not actively trying to extend their payment terms. The procurement manager sees that the payment culture is a really strong factor and causes "phlegmaticness" in negotiating payment terms.

One factor contributing the payment culture, or at least the short Finnish payment terms, is the fact that our industries are very service-heavy. Finland is a country of service business. Service companies, especially small ones that offer subcontracting, typically operate on low cash, low capital and short payment times.

If the payment culture probably affects the adoption of SCF in Finland adversely there are also factors that should advance it. Finland is a unique country in the world in that our electronic payment practices are very advanced. The e-rate in general is comparatively high (Bank of Finland, 2013; Seifert and Seifert, 2011) but especially on the business-to-business market there is something that other countries lack altogether, and that is the Electronic Data Interchange (EDI) connections between companies, and operators who have agreed to use each other's networks for the benefit of each party. As mentioned before Supply Chain Finance as an advanced and highly automated system works best when all the phases are digital and there is no paper and as little manual work as possible (Fellenz et al., 2009). A lot of the benefits are lost if that is not the case.

The short payment terms, high level of automation and high share of electrical invoicing mean that, to start with, our efficiency of working capital management is fairly good, which means that there

has been no acute need for Supply Chain Finance, demonstrated by companies such as Diddley. The procurement manager of Elvis told an anecdote from his previous position where there was a race between country subsidiaries for lowering net working capital. Finland did very poorly in the race, because working capital was already very well managed.

You could say that the infrastructure and the prerequisites are already well in place. Of course this isn't the case with every company, as is evident from the bank interviews. Still the situation can't be much better in the context of other countries. The other favourable factor, related to e-invoicing, is our legislation. In order for the counterparties to be happy, especially the banks, the transfers have to be communicated and that has to be legally binding. Luckily the Finnish legislation is lenient in that an electrical notification is enough and the log that the system stores suffices as evidence in the case of a dispute, which was confirmed by the legal expert that was interviewed for this study.

4.4.3 Industry

Industry plays a role in the working capital position of a company as is evident with the case sample. This affects the possibilities to have significant effects with optimisation activities for some companies. As a financial manager with Berry noted due to the high level of current assets there are limited possibilities to affect the net working capital by extending payment terms. Industry also affects the nature of the transactions. SCF might not be that suitable for e.g. service business or project business which was noted by for example the representative of Bank A. Being able to agree over delivery between the counterparties is essential, which might be challenging with services or for example IT.

Industries vary in their other structural characteristics as well, such as the level of volatility in demand. This is reflected in how payment term extensions affect the financial position of suppliers. Tanrisever et al. (2015, 2012) and van der Vliet et al. (2015) note that the benefits the supplier can derive from the arrangement might depend in a complicated fashion upon the demand it faces. In the presence of opportunity costs for holding receivables more volatility in demand allows for more extension in the payment terms (Tanrisever et al., 2015, 2012).

Supplier management is to some extent industry-specific too. The procurement manager of Berry, operating in construction business, stated that the focus has traditionally been on price racing in their industry. The type of relationships could thus be called transactional (Wuttke et al., 2013b). As there is high pooled dependency (Wuttke et al., 2013b) with the suppliers of Albert due to the nature of their industry they have been able to cover 80 percent of their spend by focusing only on a small number of their strategic suppliers.

4.5 AGENDA-SETTING AND FAMILIARITY WITH SCF HAVE TO MEET

In order for the adoption process to progress there has to be a sufficient level of familiarity within relevant decision-making roles in the firm, as well as a sense of urgency or at least importance with the topic on the agenda. Which one comes first, agenda or familiarity, can vary. The interaction can happen either by *Scouting* for a solution for an existing agenda or *Fitting* a promising solution into a challenge that is identified afterwards. Familiarity and Agenda-setting coming together is demonstrated in a clear fashion with Cochran which is currently in the Clarifying stage. The procurement manager speculates the reasons why they haven't adopted the solution before:

> *"In my eyes there have been two factors. The first one is that we haven't recognised this opportunity before, that is to say that there hasn't been awareness about the model or its benefits in a large enough scale for us to consider implementing it. The other factor clearly is the imperative to optimise working capital."*

It seems that neither Agenda-setting nor Familiarity with SCF alone is enough for a company to advance in the SCF adoption process. For example with Diddley there is a level of familiarity, at least with the interviewee. But "there hasn't been a need for SCF", according to the procurement manager's words, which indicates that the issues underlying Supply Chain Finance usage are not on the agenda.

Moreover, there is proof in the literature that a single "stream" on the agenda isn't enough either in the adoption of Supply Chain Finance. According to Wuttke et al. (2013a) "firms need to focus on working capital improvements and stable supply chains simultaneously". The notion about stable supply chains could be seen to concern supplier management as a concept especially. This statement is well aligned with how things played out for Cochran:

> *"[As we've] thought about how [the solution] could support our goals related to working capital optimisation and particularly managing supplier relations, I believe that there are good elements that we can make use of in that environment."*

So when it comes to Cochran they clearly have not only the familiarity on a high level, they also have both working capital optimisation and supplier management on the agenda. Currently they are not selling receivables or using any other kind of financing instruments, giving further indication that it's not only working capital optimisation that they are after. Remember the representative of

Bank D who noted that there are other solutions that are more attractive and easier to implement than Supply Chain Finance, in case the company is only after working capital optimisation.

Albert, the one already using reverse factoring (both upstream and downstream), has a small amount of very large suppliers included in its program. It's not clear that there would have been any supplier relation related agenda when choosing to implement supply chain finance – only working capital optimisation is discussed. As mentioned by the finance manager, when they had their working capital project ongoing they started with selling their receivables. The focus on working capital optimisation and the fact that they are not interested in including any of the smaller supplier indicates that they are in fact using reverse factoring as opposed to Supply Chain Finance.

For Berry the main motivation is clearly on the working capital optimisation side, but at the same time they talk about how they should take care of their supplier base as well as improve their payment process, indicating that supplier management issues are on the agenda as well. As a result they are considering a Supply Chain Finance solution.

With the confidence of the case examples above I posit **Propositions 1a** and **1b**:

PROPOSITION 1a. *In order for Supply Chain Finance to end up on the company agenda the two categories of Agenda-setting and Familiarity with SCF have to be sufficiently developed. Both working capital optimisation and supplier management have to be on the company agenda, and the familiarity has to be sufficient on the company level.*

PROPOSITION 1b. *Whenever the single motivator on the agenda is working capital optimisation, other solutions, such as selling receivables, are considered firstly.*

The propositions indicate that if the only motivation for the company is to optimise its working capital there are other solutions that it's more likely to choose over Supply Chain Finance. Bank D very strongly raised selling receivables as a more attractive option if the only motivator is working capital optimisation. Selling receivables is exercised in a straightforward manner and doesn't require cross-functional interaction or involvement of the supplier (or customer) base.

4.6 MATCHING

Once the agenda is set it is carried on to the Matching stage where the goals and needs are compared to the features of available solutions. The available solutions in supply chain finance mainly come from banks currently. One of the insights of this study is that the solution isn't one-sidedly matched to the buyer company. Banks have to consider the feasibility and the business case for them as well. As I see it the banks play a major role in what kind of form the final solution takes.

Another insight is that there is a difference between the reverse factoring and the "new wave" of Supply Chain Finance, both of them answering to a differing focus on the agenda and especially setting different requirements for banks in terms of redefining the solution.

Most of the case companies are currently in the Matching stage and they basically know what they want and need and what the benefits of solution are, at least on a theoretical level. At the time of this study Berry, Elvis and Freed are well familiar with Supply Chain Finance and its potential and they are currently looking into it more deeply. Berry has a cross-functional team set in place and they are conducting a pre-study with the help of a potential service provider. Elvis is assessing the potential as well as there is an on-going dialogue between the functions in the company and a service provider. Freed has discussed the topic with potential service providers and has organised a few internal workshops on the matter. They are currently in the middle of a major ERP rollout, the objective of which is to harmonise and consolidate their systems.

One of the main findings of this study is that, as an extension of the model by Wuttke et al. (2013a), the concepts of *restructuring* and *redefining* are found to play a big role already before the decision to implement is made. Wuttke et al. (2013a) identified restructuring and redefining as two separate processes that are closely linked and feed each other in the first part of the implementation (after the decision to adopt is made) of a Supply Chain Finance solution. Restructuring means altering the company structures (IT, job descriptions etc.) and processes (procure-to-pay, for instance) to align with the solution. Redefining then is related to how the solution can adapt to the needs of the company, for example the scope of suppliers they want to include. Rogers (2003) hints at the same conclusion by stating that the implications of the implementation stage are anticipated in the Matching stage. This study takes that consideration as an even more integral part of initiation.

Both sides of the arrangement, buyer companies and banks alike, have to consider the effort versus the gain that the potential program implies. In terms of conceptual categories this implies for buyer companies a n*eed to restructure*, and for the banks (or other service providers) a *need to redefine*. For companies implementing Supply Chain Finance is a major project so they want to make sure that they also benefit from it afterwards. For banks the implementation means costs and tied-up resources for an extended period of time. They too have to weigh the pros against the cons and decide whether a facility is worth their effort. The fact that banks currently engage only in programs with a limited number of large suppliers indicates that direct and indirect costs that are associated with reverse factoring are significant.

The extended framework for the Matching stage in the Rogers (2003) innovation adoption process is presented in **Figure 9**. Arrows in the illustration depict the requirements that the different counterparties have for the solution and what that means in terms of the other party i.e. whether there's a need to redefine the solution or restructure the company in terms of processes or IT infrastructure, for example. In trying to match their agenda (increasing the amount of accounts payable, for example) companies are especially interested about the portion of their supplier base they are able to take on board. Related to this are the concepts scope of suppliers, their amount and size in terms of spend, as well as geographical spread. These are important considerations for the bank side as well as we'll learn later on. Banks also have requirements for the buyer company which has to be creditworthy enough. This is demonstrated by the concept *readiness of the buyer*. Eventually, as a result of negotiating the needs to redefine the solution and the need to restructure the organisation the counterparties might be able to agree on a mutual scope for the solution.

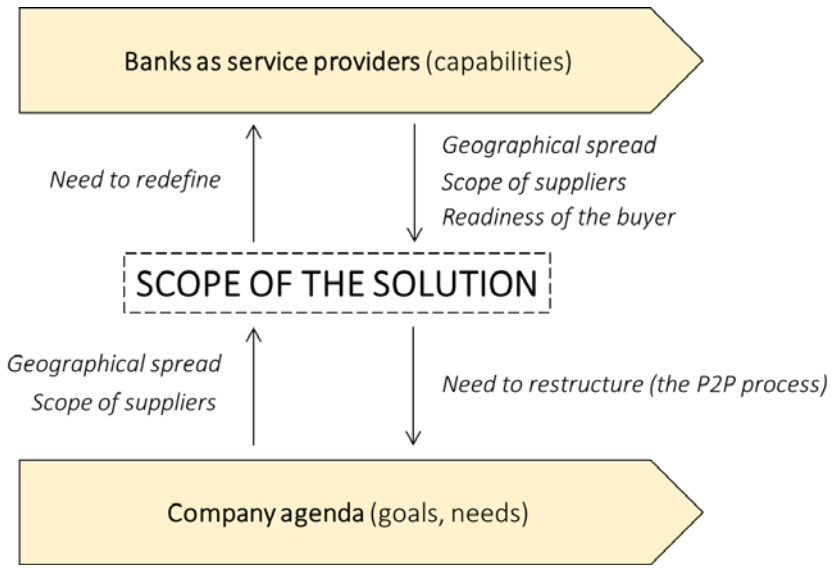

Figure 9 In the Matching stage various factors are considered on both sides to find a common scope for the solution

As opposed to Wuttke et al. (2013a) there is more focus on the bank viewpoint in this study. It became evident from the interviews that the agenda of the company isn't automatically satisfied in the case of a solution as multi-dimensional as Supply Chain Finance, but that the capabilities of the service provider has to be taken into account as well as the requirements for the scope of the solution are very company-specific. The characteristics of the existing solutions could give clues as to what are the capabilities and potential limitations of the solutions. I'll discuss those characteristics in more detail in the following sections.

4.6.1 Scope of suppliers

The scope of suppliers refers to the amount and size of suppliers that the company wants to include in its solution. As has been stated before the main motivation for buyers is to optimise their working capital by increasing their amount of accounts payable. This is done by extending their payment terms towards suppliers. There are two factors that should be considered. The first one is the extension that is feasible. The second one is the amount of spend that they can cover with these extensions. This is one reason why the scope of suppliers is important: the more suppliers are in the program the more spend is covered by the payment term extensions. The other agenda, supplier management, is perhaps even more concerned with the amount of suppliers than can be covered with the program. If the goal is to get a better hold of the supplier base as a whole the facility has to be extendable to include even a large amount of smaller companies. The procurement manager of Cochran shared their vision about the solution:

> *"Our aspiration is for this model to be so straightforward, scalable and easily deployed that we could offer this to our entire supplier base regardless of industry or size."*

In the Wuttke et al. (2013a) framework the scope of suppliers is one of the main concepts of the redefining process. I argue that it is an important consideration already in the Matching phase when deciding whether the available solutions can meet the company needs. The finance manager of Berry expressed their view about the capabilities of existing solutions:

> *"[T]he Supply Chain Finance solutions of some banks support around ten to twenty suppliers. Our need for Finland alone would be thousands. So there's a discrepancy."*

This is confirmed by Bank A and the following quotes:

> *"We're not doing small programs."*
>
> *"[A] small company in a supply chain finance facility, that doesn't exist currently. There are these middle-sized companies that are part of some program. Or large companies that are in the supply chain finance facility of an even larger company."*

In addition to the number of suppliers their size is also important if not even more important. By focusing on the few largest suppliers a significant impact on working capital can be achieved with relatively small effort. This is the approach preferred by the banks as supplier onboarding can be a resource-intensive process. With smaller suppliers and their smaller amounts of discountable

receivables the benefits, however, are quite limited. Onboarding the smaller suppliers isn't thus in the interest of the banks. Probably partly because of this, and because reverse factoring is only one part of their wide product portfolio, banks don't really possess the capabilities to onboard suppliers on a larger scale in a more automated manner. The representative of Bank D commented:

> *"[Supplier onboarding] is the biggest challenge considering the [banking] industry, I mean how financial institutions solve that. And there are a lot of associated costs and also uncertainty."*

Albert that is already using supply chain finance facilities actively has included only its largest and most strategic suppliers in its reverse factoring program, as mentioned several times. As the finance manager states they are not even interested in taking their smaller suppliers on board. There is thus a match between company needs and bank capabilities. Albert has been able to cover 80 percent of its spend with the program.

4.6.2 Geographical spread

Geographical spread is conceptually situated along the local vs global dimension. As noted before, supply chains are increasingly global and companies are sourcing their activities all over the world (More and Basu, 2013). On the other hand banks are more comfortable acting locally. This is a mismatch when thinking about companies looking to spread the solution to reach their foreign suppliers. It became evident from many of the interviews that complexity related to a supply chain finance solution is related especially to global solutions.

Challenges with global solutions include varying laws and issues with language, distance and time zones, as noted by More and Basu (2013) as well. Banks are very interested in their risk, and Risk-Weighted Assets is a metric that is monitored very closely. An unknown operating environment means risks for banks. Regulation plays a role as well as banks are required to know their customers which might be more difficult if a supplier operates in a faraway country. As the representative of Bank A put it:

> *"Let's say that no financial institution, or very few, can handle this globally […]. This brings us to the local aspect again. There are operators who are strong in certain areas."*

In order for banks to be able to execute global supply chain finance solutions they would have to partner up with other banks or service providers.

As discussed in the literature review the track record and credibility of the solution provider plays a role in how willing suppliers are to adopt the proposed solution (Dello Iacono et al., 2015; Wuttke et al., 2013a). As local operators are better known and more trustworthy in the eyes of local businesses the adoption is facilitated in domestic programs.

4.6.3 Banks as service providers

Banks have so far been the ones to offer supply chain finance solutions. Investigating the service provider side is interesting in the context of this study as there could be some structural factors that have affected the adoption of SCF in the Finnish market. Is the major issue with the diffusion of SCF in the availability of the solutions? Or are there some factors, some shortcomings that have kept the solution from becoming wide-spread? Banks have improved their offering during the last years, as stated by the financial manager of Albert:

> *"Ten years ago the models related to asset securisation and so forth were quite complex, and only when the first banks started to offer really straightforward solutions i.e. simple contracts and platforms that allow for straightforward discounting […] Only then it started to become reasonable."*

As far as the banks are considered there is the profit requirement i.e. banks don't want to lose money in the first place when doing business. There are also the risks they have to consider. Credit risk is something banks are very familiar with. Business or performance risk is something that they don't necessarily know in each individual case. With SCF there isn't much of that performance risk as the invoices are accepted by the buyer which means that the receivables will get paid eventually. For the banks reverse factoring is just another product in their portfolio, even though they have recognised that this is a field that is raising interest and growing. On the other hand these new solutions could threat the existing business of banks (Camerinelli, 2013). As Dello Iacono et al. (2015) noted, competition decreases the market potential for banks.

Terminology is not set in stone, and the solution itself is open for interpretation and there is no one right way of doing it. The representative of Bank B described the solution as "factoring or selling receivables that is initiated by the buyer". According to the bank representatives the features are very case specific. The only fundamental factors in the solution are related to the tight regulation the banks act under and legal considerations which set the ground rules for operating. Legislation provides the framework for the business and ensures that the arrangement is binding.

Legal considerations include the invoice transfer being binding. The Finnish legislation, as discussed with the country context, is luckily lenient on this so that an electronic message is enough for a

binding agreement. The banks also have a requirement to know the companies they deal with very well, the so-called Know Your Customer (KYC) imperative. This requirement is easily met in Finland where all the company registers are public. Increasingly the banks are required to "know their customer's customers" too which could be seen as an extension of the KYC requirement on the supply chain level.

On the EU level regulation we have the Basel III accord which adds requirements to the quality of capital banks have and thus the financing that they offer (Laisi, 2012). As in supply chain finance based on receivables there is always the invoice to back up the lending it can be considered a sensible business even though there is no collateral per se. Banks are very much interested in the Risk-Weighted Assets (RWA), to a large extent because of the regulation. There is less risk in reverse factoring than for example traditional factoring which makes the solution more attractive for banks in a risk-weighted sense.

Banks have to solve supplier onboarding in co-operation with the buyers because getting suppliers to participate is crucial for the success of the arrangement. As discussed with the scope of suppliers, banks typically can't handle a large-scale onboarding campaign. Factors that could make reverse factoring solutions somewhat rigid include the contract structure, the due diligence required due to regulation and the use of platforms which are originally meant for factoring programs. The representative of Bank A commented:

> *"We do this in practice with our factoring application with which we run our other receivable financing business too."*

A representative of Bank C explained where the systems fall short:

> *"They aren't that advanced because they are made for factoring and meant for a completely different purpose."*

According to the representative of Bank D reverse factoring is not ideal for banks business-wise because while the upside potential is known (the profits to be made are set when agreeing on the margin) there are many factors and variables that can make the solution costly for the banks. Supplier onboarding is one such question mark. In this light too it would make sense for the banks to prefer other solutions, such as factoring and selling of receivables, over reverse factoring because with factoring they can manage with their existing capabilities and the cost side is better known too.

Supply chain finance solutions haven't been very visible in the market, as stated before. Banks might be inclined to sell supply chain finance solutions to their existing customers exclusively, as indicated by Bank B, which might limit the availability of such solutions. But this doesn't seem to be a norm. It could be that as the product is just one of many in their portfolio and banks serve first and foremost their existing customers the solutions haven't been marketed that much, resulting in a lack of publicity. In addition the customers are handled on a case-by-case basis. These could be reasons why there is still work to be done with the awareness and familiarity for supply chain finance solutions on the market level. Getting more positive publicity could affect the attitudes as well.

At least according to the interviews the banks don't see themselves as competing with the new 4th party system integrators. These new operators bring in expertise and services that might be lacking from the banks, i.e. data modification and transfer as well as supplier onboarding capabilities. At the same time banks see them to pave the path and grow the market.

It is clear that banks come from a factoring mind-set which is why I see fit to define the solution they offer generally as reverse factoring (as opposed to Supply Chain Finance). For example one of the existing solutions, the one used by Albert, could be characterised as a reverse factoring facility. They have included only the largest and most strategic partners in their program but due to the nature of their industry they have been able to reap major benefits from the solution because the spend to those suppliers is so significant.

4.6.4 Readiness of the buyer

Readiness of the buyer is a concept that refers on the one hand to the creditworthiness and on the other hand to the technical and processual readiness of the buyer company. In order for the facility to be feasible in the first place suppliers must be able to benefit from the credit rate of the buyer (Tanrisever et al., 2015, 2012). Wuttke et al. (2013a) refer to this as SCF leverage. As an interesting case example Albert uses supply chain finance solutions also downstream, as a supplier. In some cases they get the money cheaper by selling their receivables themselves than opting for a reverse factoring program of one of their customers. So for them there is no credit arbitrage in their customer extending their credit terms. Another important factor is the stability of the buyer. As the banks follow the buyer closely to determine their risk exposition even a small deterioration in its performance can influence the margin banks charge which then in turn is reflected in the cost of financing for the suppliers.

As the Supply Chain Finance solution is technically demanding the procure-to-pay process of the buyer has to be advanced enough. Being advanced means that the invoices are handled

electronically but also that the reconciliation process supports the system. An example of this technical readiness is provided by the Bank A representative:

> *"Systems might be all spread out and they have to be consolidated. Only after that can you start doing reverse factoring in a larger scale and in a controlled manner."*

4.7 MATCHING THE COMPANY AGENDA WITH AVAILABLE SOLUTIONS

The core category that ties the analysis together was found to be the one in the title. In this section I'll delineate how the need to restructure (buyer side) and the need to redefine (bank side) affects the counterparties' willingness to participate in the arrangement and how the final scope of the solution is determined.

4.7.1 Need to restructure

As Wuttke et al. (2013a) note "SCF requires firms to consider working capital efficiency gains through structural adaptations". Indeed, in the light of this study it seems that the concepts of redefining and restructuring are essential already before the decision making itself since companies have to consider the repercussions before committing to a new solution (Rogers, 2003).

Restructuring is related especially to the company processes and IT infrastructure that fall under the *procure-to-pay process*. Technical readiness is one part of the prerequisites that a company should fulfil before engaging in SCF. The concept covers the *rate of electronic payments* the company uses as well as the *degree of automation* in their payment process. Albert, for example, only handles electronic payments. Degree of automation was found to be important by Wuttke et al. (2013a) as well. If a part of the procure-to-pay process, the *invoice matching*, for example, takes weeks then the solution isn't going to be very successful or useful as suppliers receive financing only against an approved invoice. Restructuring may entail changes in how work related to paying invoices is carried out. Then again companies are typically looking for an ease of usage so the facility shouldn't add too much extra work to their everyday job.

The procurement manager of Berry stated that "a fundamental cultural change" is required before they can execute Supply Chain Finance properly. For them the issue specifically related to when they allow their suppliers to invoice them i.e. at which point of the delivery the invoice arrives. Currently they struggle with a large number of claims, a situation which is problematic considering implementing SCF. Freed is actively pursuing their need to restructure as they are bringing their ERPs under one system so invoices can be managed on a centralised level. This in turn should facilitate the adoption. The issue that Cochran is facing concerning restructuring is the time it takes them to approve their invoices.

On the other hand the need to restructure can also be seen as a positive thing as a side product of the implementation project can be improved processes and a higher level of automation, as well as better forecastability and visibility of cash flows. It has to be noted that the reconciliation of invoices can take a long time due to characteristics of the business, e.g. a requirement to carry out a thorough quality check. A financial manager of Berry said that:

> *"If we adopt this system, we'll have to restructure our whole supply chain. […] This is a great project if we can pull it through."*

But as the other financial manager noted, if improving the procure-to-pay process would be the only benefit then that issue could probably be fixed even without Supply Chain Finance. In that sense improving the procure-to-pay process could be seen as an external or a qualitative benefit (Pfohl and Gomm, 2009; Wuttke et al., 2013a).

4.7.2 Need to redefine

Banks' need to redefine their solution relates conceptually closest to the technical adaptations that have to be made, number of suppliers to be included and the geographical spread that the company is looking for. Service providers are typically able to customise the solutions and this is undoubtedly one factor in the decision making process of the buyer company. There are many ways in which such a facility can be executed technically. Either the bank receives the invoice material directly or there is a dedicated online platform where the material is handled. One of the key steps and at the same time one of the biggest challenges in setting up an SCF program is supplier onboarding. The importance of involving suppliers in an upstream supply chain innovation is emphasised by Wuttke et al. (2013a).

Geographical spread is an important considerations for banks as global solutions bring a lot of complexity into supply chain finance arrangements. Finnish companies are increasingly global so implementing a full-blown supply chain finance program might be a challenge. Each new country comes with new legal considerations as there is no pan-European legislation that would conduct the use of SCF. Far East is another story as well. The challenges are somewhat the same that banks face in their native markets too but as the law is different in each country the same issues have to be solved over and over again. When talking about global solutions language considerations become important as companies probably want support in their own language.

What was observed from the interviews is that the existing solutions don't allow for including a large number of suppliers, and no small suppliers because they are not worth the while. With current solutions there are so many practical considerations to be made, starting from the many

information systems of suppliers and the contracts that have to be negotiated each time. For Albert implementing a new supplier into their reverse factoring program takes months.

Based on the findings above I posit **Propositions 2a** and **2b** that summarise the major insight of this study related to the previous work by Wuttke et al. (2013a).

PROPOSITION 2a: *While the actual restructuring and redefining processes happen during implementation the companies already consider these aspects before making the decision to move forward. On the buyer company side the need to restructure is a major consideration, whereas the service providers have to take their need to redefine into account when thinking about a potential program.*

PROPOSITION 2b: *The needs to restructure and redefine can be major obstacles for implementing SCF, but on the other hand on the buyer side it can also act as a driver.*

4.7.3 Scope of the solution

If the company and the bank can't agree on the scope of suppliers, for example, it could be that an upstream supply chain solution isn't feasible. Depending on the agenda and the capabilities of the service provider the company might implement a reverse factoring solution or a Supply Chain Finance solution (or even start to sell receivables). If the readiness of the buyer company isn't on a high enough level and they are unable or unwilling to restructure smaller factoring type solutions can be considered as they are doable even based on paper invoices, as stated by the representative of the Bank C.

Albert is a good example of a company where the agenda and the capabilities of the bank have met. They were interested first and foremost in optimising their working capital by including a selected number of strategic suppliers so a reverse factoring arrangement fit the need perfectly. Cochran, in a similar manner, found a Supply Chain Finance program to correspond to their need to manager their supplier base while at the same time improving their working capital position. Based on these insights I posit:

PROPOSITION 3a: *The final scope of the solution is determined by the agenda of the company vis-à-vis the capabilities of the service provider. Most notably the scope of suppliers is a major antecedent in whether the company will adopt reverse factoring or Supply Chain Finance.*

PROPOSITION 3b: *If the agenda of the company and the capabilities of the service provider don't match well enough to initiate a Supply Chain Finance program another scope might be adopted, such as reverse factoring.*

4.7.4 The final framework

Both Agenda-setting and Matching stages are brought together in the framework in Figure 10.

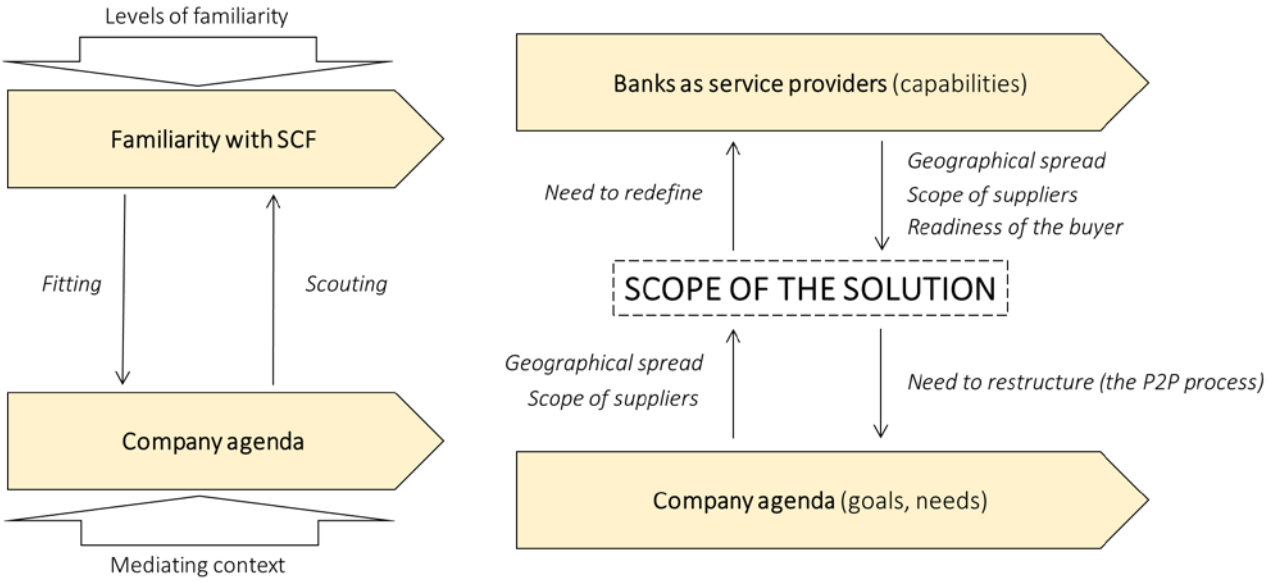

Figure 10 The adaptation of the Supply Chain Finance adoption framework

After the possible scope of the solution is clear the company can make the decision whether to advance with a particular service provider or not. The Matching stage is of paramount importance in the adoption process as after the decision is made the company is committed to the solution. The gravity of the decision is demonstrated by the statement of the finance manager of Elvis:

> *"If you choose to move forward it's something that you stick with, even though there would only be one supplier using it."*

4.8 Implementation

Just as Wuttke et al. (2013a) comment on the initiation process without really focusing in it I will shed some of the knowledge I got from my interviews concerning the later stages in the SCF adoption process, namely implementation.

Implementation is a project which typically takes several months. It is a major undertaking and a heavy effort. There's a degree of complexity to implementation. One concept that adds to the complexity is the amount of stakeholders, as due to the cross-functional nature of the solution there are many functions that need to be involved in the project. These include at least the finance function, procurement, IT, accounting and legal department. The procurement manager of Cochran emphasised that involving the right stakeholders early on is essential for the success of the implementation project. Another success factor in implementation is finding a good banking partner (Seifert and Seifert, 2011).

Because of the company-wide consequences of implementing Supply Chain Finance the top management has to be involved for the success of the project as with any major development initiative, a notion which is corroborated by for example Seifert and Seifert (2011) and Wuttke et al. (2013a). Contracts should be as straightforward as possible to facilitate adoption, which was one of the main messages of the finance manager of Albert.

At least in organisations where the topic is new there has to be some explaining and internal educating in order to get all the stakeholders committed to the project. Both companies that are past the initiation sub-process, Albert and Cochran, describe their efforts to pass on the message of reverse factoring and Supply Chain Finance to their colleagues. According to the procurement manager of Cochran:

> *"The awareness had to be raised internally, and what this whole thing generally is about."*

During the project the technical adjustments are made and the payment process is sharpened. I initially conceptualised the technical and processual requirements as *prerequisites*. Implementation is the project that is carried out once all the necessary prerequisites, or the conditions the buyer company has to meet, are verified. Sometimes they are brought up to the appropriate level alongside the implementation. This is essentially what Wuttke et al. (2013a) call restructuring.

Supplier onboarding is an essential step in adopting SCF (Wuttke et al., 2013a). Procurement, who is responsible for the supplier management and the supplier onboarding typically lacks financial competence to efficiently communicate to the suppliers the working capital benefits of SCF and has to be supported by either the finance department or the bank. The same lack of familiarity with financing could be true with suppliers too, especially the small ones, in which case they too have to be educated about the solution. Supplier onboarding can be challenging also because procurement managers or category managers don't typically have the required marketing or selling skills to disseminate such solutions efficiently.

The study also reveals that the typical reason for programs being unsuccessful is that the supplier onboarding activities have been insufficient. This calls for an earlier dialogue with the potential supplier base (Seifert and Seifert, 2011) or a 4th party system integrator to lead the onboarding campaign. Like Wuttke et al. (2013a) I too found that identifying the right people within the supplier companies is important, as the sales people aren't concerned with the general message of working capital optimisation of SCF.

Even though the implementation is a complex project with many things to consider, many stakeholders and a number of variables, the bank representatives were generally of the opinion that it is not a problem and has never proven impossible. Still the definition of a successful implementation should be clarified, as only a handful of suppliers in a program might not be considered a success. This is in line with the message of the representative of Bank D who described cases where supplier onboarding has fallen short.

5 CONCLUSIONS

The findings indicate, first of all, that there is a growing interest in the field of supply chain finance as almost every case company has already taken steps to adopt such a solution. Recent research also points to the fact that supply chain finance arrangements are more beneficial than direct borrowing for members of the supply chain (Moussawi-Haidar et al., 2014; Pfohl and Gomm, 2009; Wang et al., 2012) and that for example with a reverse factoring arrangement there is significant value to be created (Seifert and Seifert, 2011; Tanrisever et al., 2015, 2012).

The initiatives that have been taken in the case companies are generally in a very early stage so the topic seems to be fairly novel. As the working capital position of my case companies is rather weak my findings are aligned with Wuttke et al. (2013b) who observed that it is an important antecedent to focus in Financial Supply Chain Management practices. I didn't observe there to be any correlation between the types of the buyer-supplier relationships and the engagement in Supply Chain Finance which corroborates the view of Wuttke et al. (2013b).

The main agendas guiding the adoption process are working capital optimisation and the increasing focus on supplier relations as a strategic resource. Familiarity with SCF, in addition to the agenda, is key in getting past the first step of the adoption process. The findings reveal what requirements the solution sets to both parties of the arrangement. The need to restructure and the need to redefine are important considerations as both buyer companies and service providers assess the fit of the solution to their needs and capabilities. Especially important are the geographical spread and the scope of suppliers. The final scope of the solution is a sum of several factors, namely the agenda(s) that are perceived as important in buyer companies and the counterparties' willingness and capability to restructure and redefine to accommodate for the Supply Chain Finance solution. This process is addressed in more detail in the next sections where I answer each sub-question individually and conclude by commenting on the main research question.

5.1 ADAPTATION OF THE ADOPTION FRAMEWORK

The adoption process of Supply Chain Finance in companies advances along a set of steps first outlined by Rogers (2003). The adoption is initiated as a combination of two processes of Agenda-setting and Matching. In the Agenda-setting stage the agenda to guide the solution is set and in the Matching phase the solution of a service provider is fitted with the company needs and goals. The key contribution of this study was to extend the initial model which is illustrated in **Figure 10**.

The findings outline the mediating role of contextual factors that affect the Agenda-setting in companies, the two most notable ones being the current economic conditions and the Finnish payment culture. Thanks to the payment culture the working capital management has so far been fairly easy for Finnish companies, as companies have been able to trust that they get their payments in time – and fast. As a result of optimisation initiatives most of the case companies are trying to improve their working capital by extending their payment terms. This was mentioned as the main agenda in relation to the solution. Extending payment terms isn't easy due to the payment culture and the economic conditions so companies are looking for ways to lend a hand to their suppliers in exchange for longer payment terms. It was observed that the companies that were currently conducting a pre-study on SCF had also supplier management on their agenda.

The findings thus indicate that both working capital optimisation and supplier management have to be on the agenda for the company to opt for Supply Chain Finance as opposed to any other solution, as observed by Wuttke et al. (2013a) too. An agenda focused solely on working capital optimisation favours other financial instruments, such as selling receivables, as these are a lot more straightforward to implement. When supplier management is a major interest as well the upstream supply chain finance solutions become relevant. Finally, the scope of suppliers determines whether the solution that is more appropriate for the buyer company is reverse factoring or Supply Chain Finance. This is related to the different nature of the two solutions and depends to a large extent on the capabilities of the service provider. Supply Chain Finance being more automated lends itself to covering a larger supplier base. This larger group of suppliers likely consists of mostly SMEs who can benefit from the financing that is available at the rate of the buyer.

In addition to the agenda the level of familiarity has to be high enough on the company level. The solution in general is fairly new which is evident when considering the terminology that is open for interpretation. Most of the case companies have only recently started to look into the possibilities of Supply Chain Finance. Both individual and market levels interact with the company level, and external service providers have an influence on each level. On the individual level the dialogue with banks is concentrated on the finance side which creates an asymmetry in familiarity between finance and procurement, the two main functions concerned with Supply Chain Finance. In order for the knowledge about the possibilities of SCF to disseminate across the company there has to be some interdepartmental interaction, notably between the two function mentioned above. All the companies that have advanced past the Agenda-setting stage are well familiar with the solution as they understand the working principle and the potential benefits. Considering the case companies

it seems that the agenda to improve the working capital position has been in place before they learned about the possibilities of Supply Chain Finance.

Familiarity was also found to reflect the attitudes and preconceptions about the solution as well as previous experiences with supply chain finance solutions. Elvis has doubts about the solution because they are not sure whether they will find suppliers who are interested. They have tried to start similar working capital improvement initiatives before without much success. Their previous offers for cash discounts haven't been received well. Similarly, Berry has implemented factoring before, but that experience was negative leading to scepticism when considering SCF (Fellenz et al., 2009). Both Elvis and Diddley were very much concerned about the fact that suppliers would increase their prices as the result of the extension in payment terms even though the solution should more likely have an impact in the opposite direction (Seifert and Seifert, 2011). The financing rate of suppliers should decrease since many already opt for factoring or cash discounts which are expensive (Hofmann, 2005).

The concepts that Wuttke et al. (2013a) identified to be part of the implementation process, namely restructuring and redefining, were found to play a big role during the Matching stage as well. The concept *need to restructure* encompasses the modification the buyer company potentially has to make to their systems and processes. The level of automation in the procure-to-pay process and invoice reconciliation are a couple examples of its properties. On the service provider side the *need to redefine* relates notably to how scalable the solution is in relation to the supplier base of the buyer. The geographical spread of the solution can also play a role depending on the goals of the buyer company. After negotiating these needs with one another the company and the service provider agree on the scope of the solution.

Drawing on the insights of the analysis **Propositions 1a**, **2a** and **3a** answer the first research question:

PROPOSITION 1a. *In order for Supply Chain Finance to end up on the company agenda the two categories of Agenda-setting and Familiarity with SCF have to be sufficiently developed. Both working capital optimisation and supplier management have to be on the company agenda, and the familiarity has to be sufficient on the company level.*

PROPOSITION 2a: *While the actual restructuring and redefining processes happen during implementation the companies already consider these aspects before making the decision to move forward. On the buyer company side the need to restructure is a major consideration, whereas the*

service providers have to take their need to redefine into account when thinking about a potential program.

PROPOSITION 3a: *The final scope of the solution is determined by the agenda of the company vis-à-vis the capabilities of the service provider. Most notably the scope of suppliers is a major antecedent in whether the company will adopt reverse factoring or Supply Chain Finance.*

5.2 THE ROLE OF BANKS

The role of banks in adopting Supply Chain Finance is embedded in the three propositions presented above. First of all, Familiarity of SCF is a crucial element in the adoption process in order for the company to get beyond the first stage, namely Agenda-setting. Banks effect the familiarity of companies on all the three levels (individual, company and market) but most notably on the individual and market level. The company level isn't addressed directly by the banks as they typically interact only with the finance function.

As the company advances to the Matching stage they try and find a fit with their agenda and the capabilities of the available service providers. Banks are the predominant actors in the market, especially in Finland, and this is the other major way in which banks are part of the initiation process of buyer companies.

5.3 THE DRIVERS AND OBSTACLES IN SUPPLY CHAIN FINANCE ADOPTION

With the extended framework and the empirical evidence drawn from the interviews it is fairly straightforward to answer the third research question. In the first stage of the model both categories, namely Familiarity with SCF and Company agenda, have to be accounted for before the adoption process can move forward. An apparent obstacle can then be a lack of awareness of the solution. Because the knowledge about SCF is disseminated to the company level via the individual and market levels focusing in the interrelations should increase familiarity. Especially, in raising the awareness of the solution within a company interdepartmental interaction is an important factor.

The findings indicate that both working capital and supplier management are important drivers in Supply Chain Finance. Agendas are typically set at the top management level so high-level commitment to a certain agenda is bound to drive new solutions. As demonstrated by the case company Diddley, a firm might not consider either of the guiding agendas to be important in which case they don't advance in the process. Even when optimising working capital alone is a strategic goal for the company the preference can be towards other solutions, which is illustrated in **Proposition 1b**:

PROPOSITION 1b. *Whenever the single motivator on the agenda is working capital optimisation, other solutions, such as selling receivables, are considered firstly.*

In some cases the solutions of the banks don't correspond to the needs of the case companies. Berry and Cochran especially raised the issue with *scope of suppliers*. They would need to be able to disseminate the solution across their wide supplier bases. The flexibility of the solution offered by the service provider can thus be considered an important driver – or an obstacle, in case the solution can't be scaled. The question about *geographical spread* is crucial for banks even though in the case of the case companies it's not that relevant currently. Challenges of cross-border arrangements include multiple currencies and legal jurisdictions (More and Basu, 2013).

Likewise if the buyer company is incapable or unwilling to restructure the scope of the solution can be questioned. Then again, as implied by Berry, the need to restructure can also be perceived as an opportunity to improve the whole procure-to-pay process in the company. The discussion about the drivers and obstacles is concluded with **Propositions 2b** and **3b**:

PROPOSITION 2b: *The needs to restructure and redefine can be major obstacles for implementing SCF, but on the other hand on the buyer side it can also act as a driver.*

PROPOSITION 3b: *If the agenda of the company and the capabilities of the service provider don't match well enough to initiate a Supply Chain Finance program another scope might be adopted, such as reverse factoring.*

5.4 WHY SUPPLY CHAIN FINANCE ISN'T USED MORE IN FINLAND

Based on the answers to the sub-questions and notably the propositions above I feel confident answering the main research question that motivated this study. Firstly it should be noted that the agenda of working capital optimisation is very prevalent, in Finnish companies too. The reasons why Supply Chain Finance isn't wide-spread can thus be related either to the other agenda, supplier management, to familiarity with the solution or to the shortcomings of the available solutions. Finland as a market environment for Supply Chain Finance is both favourable and adverse. Finnish companies have a high e-rate and the legislation is lenient on electronically transferring invoices. But due to the payment culture in Finland even smaller companies have traditionally had a stable operating environment where forecasting cash flows has been fairly easy.

The procurement manager of Cochran noted that there seems to be a lack of marketing from the banks' side on the solutions. Procurement managers of both Berry and Elvis stated that there haven't been service providers in this field. Talking in terms of the framework that was formulated,

these statements indicate that there is a lack of familiarity on the market level in Finland. Banks have been the ones to offer supply chain finance solutions in Finland on a case-by-case basis, and for banks the facility is just another product in their portfolio. As such banks might have an incentive to protect their existing business from supplementary products (Camerinelli, 2013).

Since banks focus on the dialogue with the finance function further dissipation of knowledge inside the company is left to individuals. The level of familiarity on the company level can thus be accounted at least to some extent to the degree of interdepartmental interaction. In the absence of such interaction an evident asymmetry in familiarity between the finance and procurement functions can be observed. Both are very closely concerned with Supply Chain Finance solutions.

Generally speaking companies are already fairly advanced in how they handle their invoices electronically, as demonstrated by the bank interviews as well as statistics (Bank of Finland, 2013), even though there's still some work to be done as well, as indicated by Fellenz et al. (2009) too. The analysis in this study suggests that the need to restructure in companies is more notably related to their procure-to-pay (P2P) process. Sometimes even a "cultural change" is needed, as suggested by Berry. Such restructuring undoubtedly takes a lot of time and resources which can be an obstacle for adoption. Then again, improving the P2P process can also act as a major driver.

Another reason why companies haven't adopted SCF solutions so far could be the service providers' inability to meet the company agenda, or a need to redefine. The existing solutions are lacking the flexibility and agility that would be necessary, both technically (Fellenz et al., 2009) and in a process sense, to add suppliers regardless of their size or spend in a way that it would make sense to all the parties financially. Current prevalent solutions by banks, labelled reverse factoring, are best suitable for large companies connecting to medium and large-sized suppliers. Notably the onboarding activities may pose challenges to existing service providers. Banks are also uneasy with global solutions which come with a high level of complexity due to legislation and regulation (Camerinelli, 2013). In a broader picture Finnish companies are increasingly global and so are their supply chains, so in some cases being able to include foreign suppliers can be an important driver.

The initiation discussed in this study is only the first part towards truly adopting a Supply Chain Finance solution. After the buyer company is committed to the program the actual implementation starts. In the concurrent steps the internal organisation of the company as well as the communication with suppliers both take a paramount role in the ultimate success of the facility.

6 DISCUSSION

It's pretty clear that the subject of supply chain finance, especially when it comes to reverse factoring and Supply Chain Finance solutions, is still in its infancy in Finland. This view was corroborated by the interviews conducted with bank representatives. The fact that there are many interpretations of the term "supply chain finance" shows that terminology is not established which is turn is a testimony to the fact that the practice is fairly new, both to practitioners and academics alike. There are nevertheless indications that the practice is up-and-coming and it only takes a certain amount of time for the solution to properly penetrate the market. There is certainly demand from the company side (Camerinelli, 2013). The representative of Bank D shared his insight:

> *"Europe is moving forward fast. The Nordic countries are a year or two behind but the development is the same."*

Indeed, as observed by the report by BCR Publishing (2015) the European market, as part of the larger EMEA, is growing by 15-30 percent annually. Supply chain finance has experienced the largest growth in markets where the times to receive payment are a lot longer, such as Spain (Tanrisever et al., 2015, 2012). Payment terms are fairly moderate in Finland (Bank of Finland, 2013) but the payment culture is becoming more "South European", as pointed out by many of the study participants too.

Time seems to be ripe for such solutions as companies are looking for alternative sources of funding, partly brought on by the lagging economic development. New and more advanced solutions make the facility more scalable and more easily applicable within and across markets. The Supply Chain Finance solution is currently very marginal and not too many companies are even aware of it, but as the solutions become more widespread the imitation of competitors could further speed the adoption market-wide (Wuttke et al., 2013a).

The role of the focal company in initiating a Supply Chain Finance program is undisputable and it's thus the large corporations that have to lead the way in adopting the solution. Such a facility isn't in fact even available for smaller firms. The buyer company has to be able to offer financial benefits to the suppliers by means of a credit arbitrage. This sets some requirements for the creditworthiness of the buyer. In addition the buyers who initiate such a program have to have enough influence on their supplier base in order to become effective adopters (Wuttke et al., 2013a).

Most prominent industries are those where suppliers typically experience financial difficulties and that have low margins (Dello Iacono et al., 2015). The benefits that can be realised with SCF seem to depend on the extent that the demand is stochastic. Tanrisever et al. (2015, 2012) found that a higher volatility in demand increases supplier participation. This could indicate that in industries or businesses where the demand is more volatile and harder to forecast Supply Chain Finance could be more beneficial, as being able to discount invoices might decrease the operational risks.

The new needs of financing in the supply chains present new business opportunities for banks (Hofmann, 2005; Ying, 2012) especially if they manage to attract new customers. Banks as crucial financial partners have an important role in helping companies coordinate their working capital management and increasingly their supply chains too. These new branches of financing require the banks to restructure and become more customer-oriented to be able to serve their customers. Investments in technologies as well as increasing the level of customer service, involvement and understanding of customer business are also required (Silvestro and Lustrato, 2014).

When it comes to their business offering banks need to take a more consultative role and come up with wider solutions (Camerinelli, 2009). Well-known banks might even have an edge against global players as the reputation of the service providers plays an important role (Fellenz et al., 2009; Wuttke et al., 2013a). However, the solutions that are offered by the banks fall short in some respects considering that the field is moving fast and becoming ever more technologically oriented. While banks are tied with regulation and the their heavy systems, new players in the field, labelled here the 4th party system integrators, can bring value to the SCF market by providing services that are scalable and flexible and make it possible to include a larger number of suppliers within the program.

From a societal perspective this field has major relevance too. Having a limited access to bank financing leads to increasing factoring usage of SMEs (Soufani, 2000). As the amount of SMEs is high the added costs that are associated with factoring instruments could be said to have a significant impact on the economy as a whole. If nothing else, customer prices are raised as suppliers are trying to cover the costs. This has an impact on the whole supply chain and causes it to function at a less-than-optimal level.

The buyers too are looking for ways to improve their working capital positions by extending payment terms. A lot of the times they are able to do that due to their size and negotiating power but as has been discussed such a practice increases the risk of supply chain disruptions and at least deteriorates supplier relations. To be able to predict cash flows is essential for smaller businesses

which is made harder by having to wait for a longer time for payments. The question of payment terms is thus a sensitive one. The report by Intrum (2015) makes the connection between late payments and companies not being able to hire. New legislation was passed in Finland limiting the maximum payment terms. Advocating the Late Payment Directive shows that the issue is relevant all over Europe.

Some critics suggest that longer payment terms decreases the speed at which money circulates in the society. Supply Chain Finance promises a win-win arrangement, as both sides of the agreement are able to improve their cash cycles. In brief, longer payment terms don't necessarily mean that the money couldn't move faster. Supply Chain Finance shows great potential in improving the financial position of every participating company, but before it makes the final breakthrough it probably needs more proof from both academics and renowned business references alike as Finnish people aren't typically the first ones to jump on new innovations.

6.1 PRACTICAL IMPLICATIONS

In addition to the academic contributions of this study several practical implications that have managerial relevance can be drawn from the findings presented above. For example, the stages in the adoption process could help service providers segment their customers and target messages and offerings accordingly, based on the insights of this study.

According to the initiation framework in **Figure 10** Familiarity with SCF plays an integral part in companies adopting Supply Chain Finance. This doesn't include only awareness, but also knowledge and understanding of the solution as well as preconceptions that might be coloured by attitudes. To give the companies a realistic view on the possibilities of Supply Chain Finance they need to be provided with more information and education contributing to the acceptance, as noted by Camerinelli (2009) and More and Basu (2013) as well. The roadmap could be to provide appropriate training to increase the awareness of SCF after which the focus should be on increasing the level of automation and finding third party financing (More and Basu, 2013).

Providing information and education would quite naturally be the job of banks or other service providers. They could also try to address the asymmetry in familiarity with SCF by targeting marketing efforts towards the procurement functions specifically. To this date financial managers are much more familiar with the supply chain finance field even though the practice has major implications for procurement as well. By making the solution more widely known in organisations the likelihood of an initiative taking place increases, especially as the procurement side learns about the potential.

Several of the study participants stated that factoring as a solution has a bit of a bad name. Previous literature too indicates that SMEs are more likely to use factoring when their other options are scarce or when they face serious financial difficulties. With this in mind, when marketing Supply Chain Finance solutions, service providers should probably try and avoid the term "factoring" as in reverse factoring. As has been suggested in this study reverse factoring and Supply Chain Finance are in fact two different products. While the philosophy of optimising working capital is the same in both, reverse factoring is seen to descend from factoring whereas SCF is technically more advanced and automated and thus potentially covers a larger group of suppliers. Drawing the line between reverse factoring and Supply Chain Finance might emphasise the benefits of the SCF solution – its automation, scalability and flexibility – as well as establish the distance to factoring solutions.

Based on this study it seems that the solution that banks currently offer could be characterised as reverse factoring, whereas the new wave of so-called 4th party system integrators offer solutions that are more flexible. The two operators don't rule each other out, as banks still act as an important source of financing. Collaboration between these two parties thus seems inevitable, but also fruitful, as the potential market for supply chain finance solutions grows with both the growing market and the wider customer base. The 4th party system integrators seem to address a real need in the market. They bring automation and flexible processes as well as extra resources to help during the essential step in implementation, namely supplier onboarding. This is an important point as this study found that unsuccessful programs typically suffer from insufficient supplier onboarding activities.

The business model for the new type of solution should be considered carefully, as any additional charges deteriorate the benefits of the supplier, as well as the benefits of the whole chain (Tanrisever et al., 2015, 2012). Of course, in the case of external service providers, additional fees are inevitable in order for there to be a business case for each party. Still the solution has to be beneficial for everybody for the adoption to be feasible (Dello Iacono et al., 2015) so a just distribution of benefits is an important consideration (Randall and Farris II, 2009). There's also indication that the relationship between payment term extensions and the benefits for the supplier isn't linear, which essentially means that the opportunity costs should be considered carefully in each case (van der Vliet et al., 2015).

6.2 LIMITATIONS AND VALIDITY OF THE STUDY

Limitations related to the research methodology include the fact that conceptualised research outcomes in shape of core categories are related to the time period when they were formulated as well as the prevailing structures of that time (Hildenbrand, 2007). This means that I can't possibly unveil the "truth" with my research, but only give a snapshot in time what the conditions and interdependencies "could be". When following the grounded theory methodology meticulously the element of emergence strengthens the objectivity of the results, but still interpretation by the researcher can't be avoided (Hildenbrand, 2007). Different interpretations could be made based on the data which is why the emerging theory requires further testing (Corbin and Strauss, 2008).

The study could be improved in terms of its research design. More emphasis could have been put into choosing the sample in a more theoretical manner. Collecting data had to be stopped at a too early stage due to practical limitations. Some areas that were showing promise had to be left without closer scrutiny. For example, I should have sampled more the relationship between finance and procurement functions as it plays a big role in how familiarity build inside organisations. There was a limited amount of participants per company, and I only considered two important functions related to the solutions. As discussed, there are many more stakeholders involved in setting up such a facility so a wider view could have been justified. Geographically the study is limited to Finland. Of course the scope of a single thesis is limited and thus this study represents only one small step closer to a more generalisable theory.

Assessing validity in qualitative research is challenging as the methods applied rely to large extent on the thinking process and the intuitiveness of the researcher. The nature of the research is such that it is unique and hard to replicate. Rigorousness has to be built in the research process and the findings are either validated by being useful or deemed poor by not holding true in practice (Corbin and Strauss, 2008). Presenting the whole process of analysing the data is challenging, but an attempt is made by presenting some of the empirical data and showing how the results are grounded in the data.

6.3 PATHWAYS FOR FURTHER RESEARCH

This study provides a number of new avenues for research in further testing and validating the posited propositions and the framework that was formulated. A straightforward way of validating the findings would be by taking a wider sample in various industries and more interviewees from one case company covering more departments as well, perhaps including the highest CEO level. Combined with the work by Wuttke et al. (2013a) the adoption process framework of Supply Chain

Finance is now complete. As the framework is substantive in nature further research could carry on by testing it in different settings, perhaps with different innovations in an effort to move towards a middle-range theory (Corbin and Strauss, 2008). As Supply Chain Finance promises to be more scalable and flexible the research could be extended to middle-sized companies next. The study at hand concentrated purely on Finland so the sample should be expanded geographically as well. A lot of the findings are probably generalisable but still the country context brings its own idiosyncrasies.

As both this study and the research by Wuttke et al. (2013a) focus on the buyer viewpoint it would be interesting to investigate the supplier side and their motivation. The adoption process probably looks a lot different from the point of view of the supplier as the innovation is proposed (or even imposed) externally. The various factors that affect the supplier's decision to get on board could be an interesting line of inquiry. For example, Tanrisever et al. (2015, 2012) suggested that the working capital policy of the supplier plays a role in supplier participation, the ones operating with less cash being more likely to benefit from reverse factoring.

One path for research would be to study, and perhaps quantify, the level of priority that is set in the Agenda-setting stage. The priority could then be compared to the buyer company's willingness to restructure. The researcher would make observations about the relationship between the urgency of an agenda and the extent of effort the company is willing to go through when the gains are given.

The context was considered only during the Agenda-setting of companies and the conceptualisation of context in the Matching stage was left pretty thin in this study. Industrial context could significantly alter the adoption process (Wuttke et al., 2013a). It could be interesting to investigate for example how industry affects companies' need to restructure. There the goal would essentially be to discover the more attractive industries,in the footsteps of for example Hofmann (2011). Finally, by means of a longitudinal research in case companies it would be interesting to observe first-hand how companies go through the adoption process in reality and whether they in fact advance stage-by-stage from the early initiation all the way to Routinizing.

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